

ALMANAC

VII

PLANETARY

PHENOMENA OF

MARS IN BCE

The almanac VII contains a list of planetary phenomena of Mars from the 6th millennium BCE to the 1st millennium BCE, from the 54th century BCE to the 1st century BCE.

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 1

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

conjunction	-5399 Jun 03 j 11:14	29°Y27'15	0°44'35		-5394 May 06 j 02:53	0°≈	
minimum elong	-5399 Jun 03 j 09:57	29°Y25'12	0°44'43		-5394 Jun 24 j 11:17	0°X	
	-5399 Jun 04 j 07:41	0°8		retrograde	-5394 Sep 07 j 16:29	25°X25'59	
morning rise	-5399 Jul 18 j 22:56	28°852'52		min. Earth dist.	-5394 Oct 14 j 19:41	16°X38'20	0.64586 AU
	-5399 Jul 20 j 15:58	0°II		opposition	-5394 Oct 17 j 16:15	15°X29'17	0°-30'-56
	-5399 Sep 03 j 20:25	0°☾		greatest brilliancy	-5394 Oct 17 j 14:30	15°X31'03	-1.4m
	-5399 Oct 17 j 19:38	0°Ω		asc. node	-5394 Oct 30 j 22:01	10°X31'55	
	-5399 Nov 29 j 19:07	0°η		direct	-5394 Nov 25 j 16:18	6°X11'41	
	-5398 Jan 11 j 06:34	0°♁			-5393 Feb 10 j 04:07	0°Y	
	-5398 Feb 23 j 08:38	0°♂			-5393 Apr 05 j 22:25	0°8	
desc. node	-5398 Mar 06 j 21:39	7°♂45'41			-5393 May 24 j 08:15	0°II	
	-5398 Apr 11 j 13:41	0°♂			-5393 Jul 08 j 01:24	0°☾	
retrograde	-5398 Jun 14 j 17:29	22°♂09'42			-5393 Aug 18 j 23:14	0°Ω	
min. Earth dist.	-5398 Jul 11 j 23:09	17°♂11'56	0.43892 AU	evening set	-5393 Aug 21 j 08:14	1°Ω45'03	
greatest brilliancy	-5398 Jul 17 j 18:36	15°♂17'39	-2.4m	max. Earth dist.	-5393 Sep 13 j 16:47	19°Ω13'54	2.40482 AU
opposition	-5398 Jul 19 j 22:36	14°♂34'33	-6°-17'-20		-5393 Sep 27 j 19:36	0°η	
direct	-5398 Aug 20 j 19:54	8°♂21'36					
	-5398 Oct 28 j 09:23	0°☾		conjunction	-5393 Oct 18 j 04:02	15°η44'20	0°06'55
	-5398 Dec 21 j 10:45	0°≈		minimum elong	-5393 Oct 18 j 04:35	15°η45'24	0°07'01
asc. node	-5397 Jan 25 j 18:08	21°≈04'52		behind sun begin	-5393 Oct 17 j 04:40	14°η58'55	
	-5397 Feb 09 j 10:54	0°X		behind sun end	-5393 Oct 19 j 04:29	16°η31'55	
	-5397 Mar 30 j 06:03	0°Y		desc. node	-5393 Oct 27 j 13:49	23°η04'40	
	-5397 May 16 j 23:51	0°8			-5393 Nov 05 j 09:58	0°♁	
evening set	-5397 May 25 j 19:21	5°838'02			-5393 Dec 13 j 15:24	0°♂	
max. Earth dist.	-5397 Jun 21 j 07:46	22°848'34	2.62080 AU	morning rise	-5393 Dec 22 j 08:27	6°♂48'15	
	-5397 Jul 02 j 06:07	0°II			-5392 Jan 21 j 09:00	0°♂	
					-5392 Mar 01 j 11:03	0°☾	
conjunction	-5397 Jul 11 j 22:35	6°II25'46	1°09'29		-5392 Apr 12 j 17:04	0°≈	
minimum elong	-5397 Jul 11 j 21:55	6°II24'38	1°09'44		-5392 May 28 j 01:14	0°X	
	-5397 Aug 15 j 16:58	0°☾			-5392 Jul 17 j 16:10	0°Y	
morning rise	-5397 Aug 27 j 23:41	8°☾31'05		asc. node	-5392 Sep 17 j 00:09	26°Y20'38	
	-5397 Sep 27 j 07:55	0°Ω		retrograde	-5392 Oct 11 j 12:30	29°Y44'01	
	-5397 Nov 07 j 09:44	0°η		opposition	-5392 Nov 20 j 04:13	20°Y10'37	2°18'41
	-5397 Dec 17 j 10:11	0°♁		greatest brilliancy	-5392 Nov 20 j 05:06	20°Y09'44	-1.3m
desc. node	-5396 Jan 22 j 20:22	27°♁33'15		min. Earth dist.	-5392 Nov 21 j 01:21	19°Y49'27	0.66986 AU
	-5396 Jan 26 j 02:12	0°♂		direct	-5392 Dec 30 j 21:34	10°Y17'25	
	-5396 Mar 06 j 10:18	0°♂			-5391 Mar 08 j 06:29	0°8	
	-5396 Apr 18 j 05:10	0°☾			-5391 May 01 j 12:53	0°II	
	-5396 Jun 07 j 14:25	0°≈			-5391 Jun 16 j 21:13	0°☾	
retrograde	-5396 Jul 31 j 21:26	15°≈56'59			-5391 Jul 29 j 06:10	0°Ω	
min. Earth dist.	-5396 Sep 02 j 11:14	8°≈47'16	0.56214 AU		-5391 Sep 07 j 03:31	0°η	
opposition	-5396 Sep 08 j 20:34	6°≈18'00	-3°-47'-20	desc. node	-5391 Sep 13 j 09:38	4°η49'20	
greatest brilliancy	-5396 Sep 07 j 17:39	6°≈44'14	-1.8m		-5391 Oct 15 j 15:47	0°♁	
	-5396 Sep 28 j 06:31	30°R☾		evening set	-5391 Oct 21 j 04:59	4°♁21'53	
direct	-5396 Oct 14 j 20:27	28°☾08'13			-5391 Nov 22 j 19:25	0°♂	
	-5396 Nov 01 j 15:20	0°≈					
asc. node	-5396 Dec 12 j 19:14	14°≈07'32		conjunction	-5391 Dec 25 j 07:27	25°♂14'20	-1°-1'-21
	-5395 Jan 14 j 02:21	0°X		minimum elong	-5391 Dec 25 j 04:49	25°♂09'17	1°01'35
	-5395 Mar 08 j 12:17	0°Y			-5391 Dec 31 j 12:40	0°♂	
	-5395 Apr 26 j 23:06	0°8			-5390 Feb 09 j 14:48	0°☾	
	-5395 Jun 12 j 17:44	0°II		max. Earth dist.	-5390 Feb 11 j 11:14	1°☾21'12	2.43441 AU
evening set	-5395 Jul 04 j 08:40	14°II26'29		morning rise	-5390 Feb 27 j 19:45	13°☾10'30	
max. Earth dist.	-5395 Jul 21 j 05:42	25°II58'50	2.52622 AU		-5390 Mar 23 j 16:34	0°≈	
	-5395 Jul 27 j 00:47	0°☾			-5390 May 07 j 03:21	0°X	
					-5390 Jun 23 j 09:00	0°Y	
conjunction	-5395 Aug 23 j 11:28	19°☾25'18	1°02'22	asc. node	-5390 Aug 05 j 00:14	25°Y06'51	
minimum elong	-5395 Aug 23 j 13:02	19°☾28'07	1°02'40		-5390 Aug 13 j 20:29	0°8	
	-5395 Sep 07 j 01:31	0°Ω			-5390 Oct 20 j 22:22	0°II	
morning rise	-5395 Oct 15 j 23:22	29°Ω00'28		retrograde	-5390 Nov 17 j 08:22	4°II04'21	
	-5395 Oct 17 j 06:44	0°η			-5390 Dec 12 j 12:58	30°R8	
	-5395 Nov 25 j 07:46	0°♁		opposition	-5390 Dec 25 j 14:34	25°817'50	4°29'58
desc. node	-5395 Dec 09 j 17:36	11°♁11'01		greatest brilliancy	-5390 Dec 26 j 11:31	24°857'25	-1.4m
	-5394 Jan 02 j 23:13	0°♂		min. Earth dist.	-5390 Dec 30 j 06:09	23°829'14	0.63100 AU
	-5394 Feb 11 j 01:59	0°♂		direct	-5389 Feb 04 j 15:34	15°819'22	
	-5394 Mar 23 j 16:16	0°☾			-5389 Mar 31 j 10:53	0°II	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 2

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5389 May 24 j 07:36	0°☿		max. Earth dist.	-5384 May 18 j 08:04	14°♊47'18	2.66995 AU
	-5389 Jul 07 j 16:52	0°♌					
desc. node	-5389 Aug 01 j 08:19	17°♌58'15		conjunction	-5384 May 19 j 19:51	15°♊44'22	0°29'39
	-5389 Aug 17 j 08:20	0°♍		minimum elong	-5384 May 19 j 18:51	15°♊42'45	0°29'42
	-5389 Sep 25 j 05:33	0°♎			-5384 Jun 11 j 03:38	0°♋	
	-5389 Nov 02 j 16:07	0°♏		morning rise	-5384 Jul 04 j 14:08	15°♋02'56	
	-5389 Dec 11 j 16:55	0°♐			-5384 Jul 27 j 16:41	0°♌	
evening set	-5389 Dec 27 j 10:12	11°♐48'58			-5384 Sep 11 j 09:46	0°♍	
	-5388 Jan 21 j 03:14	0°♑			-5384 Oct 26 j 07:11	0°♎	
					-5384 Dec 09 j 17:44	0°♏	
conjunction	-5388 Feb 24 j 10:02	24°♑23'59	0°-58'-47		-5383 Jan 23 j 13:34	0°♎	
minimum elong	-5388 Feb 24 j 11:58	24°♑27'21	0°59'04		-5383 Mar 12 j 14:38	0°♏	
	-5388 Mar 03 j 11:34	0°♐		desc. node	-5383 Mar 23 j 13:19	6°♏03'01	
max. Earth dist.	-5388 Mar 27 j 13:56	16°♐26'51	2.55888 AU	retrograde	-5383 May 21 j 04:28	24°♏42'17	
	-5388 Apr 16 j 21:33	0°♑		min. Earth dist.	-5383 Jun 17 j 01:01	20°♏14'13	0.39777 AU
morning rise	-5388 Apr 19 j 01:18	1°♑25'22		greatest brilliancy	-5383 Jun 21 j 10:33	18°♏57'04	-2.7m
	-5388 Jun 02 j 06:04	0°♒		opposition	-5383 Jun 23 j 00:24	18°♏29'15	-5°-44'-30
asc. node	-5388 Jun 21 j 21:33	12°♒22'36		direct	-5383 Jul 23 j 07:37	13°♏06'43	
	-5388 Jul 20 j 10:20	0°♓			-5383 Sep 19 j 06:40	0°♐	
	-5388 Sep 09 j 04:50	0°♑			-5383 Nov 12 j 07:49	0°♑	
	-5388 Nov 06 j 22:04	0°♒			-5383 Dec 31 j 07:51	0°♐	
retrograde	-5388 Dec 31 j 05:47	13°♒45'21		asc. node	-5382 Feb 11 j 09:55	26°♐11'47	
opposition	-5387 Feb 04 j 20:40	6°♒16'53	5°25'32		-5382 Feb 17 j 12:16	0°♑	
greatest brilliancy	-5387 Feb 06 j 20:23	5°♒33'48	-1.9m		-5382 Apr 06 j 11:42	0°♒	
min. Earth dist.	-5387 Feb 12 j 19:28	3°♒25'40	0.53203 AU	evening set	-5382 May 10 j 19:37	21°♒40'02	
	-5387 Feb 23 j 17:02	30°♒			-5382 May 23 j 21:28	0°♓	
direct	-5387 Mar 16 j 01:55	27°♒10'57		max. Earth dist.	-5382 Jun 11 j 06:48	11°♓49'18	2.64491 AU
	-5387 Apr 06 j 07:20	0°♓					
	-5387 Jun 08 j 14:35	0°♌		conjunction	-5382 Jun 26 j 16:44	21°♓50'08	1°02'42
desc. node	-5387 Jun 18 j 09:32	6°♌13'46		minimum elong	-5382 Jun 26 j 15:36	21°♓48'16	1°02'55
	-5387 Jul 22 j 23:32	0°♍			-5382 Jul 09 j 03:17	0°♌	
	-5387 Sep 01 j 13:06	0°♎		morning rise	-5382 Aug 11 j 16:46	22°♌25'52	
	-5387 Oct 11 j 02:20	0°♏			-5382 Aug 22 j 19:33	0°♍	
	-5387 Nov 20 j 01:21	0°♐			-5382 Oct 04 j 20:34	0°♎	
	-5387 Dec 31 j 07:26	0°♑			-5382 Nov 15 j 12:02	0°♏	
	-5386 Feb 12 j 08:17	0°♒			-5382 Dec 26 j 04:26	0°♐	
evening set	-5386 Feb 18 j 11:07	4°♒09'42			-5381 Feb 04 j 15:09	0°♑	
	-5386 Mar 29 j 04:43	0°♓		desc. node	-5381 Feb 08 j 14:25	2°♑55'24	
					-5381 Mar 18 j 02:52	0°♒	
conjunction	-5386 Apr 11 j 05:20	8°♓31'04	0°-16'-6		-5381 May 02 j 16:18	0°♑	
minimum elong	-5386 Apr 11 j 06:01	8°♓32'11	0°16'15	retrograde	-5381 Jul 16 j 00:07	27°♑38'18	
max. Earth dist.	-5386 Apr 24 j 19:42	17°♓20'27	2.64104 AU	min. Earth dist.	-5381 Aug 15 j 10:50	21°♑18'09	0.51611 AU
asc. node	-5386 May 09 j 16:41	26°♓55'05		greatest brilliancy	-5381 Aug 21 j 06:28	19°♑07'43	-2.0m
	-5386 May 14 j 12:02	0°♔		opposition	-5381 Aug 22 j 23:11	18°♑29'29	-5°-2'-7
morning rise	-5386 May 29 j 16:30	9°♔42'06		direct	-5381 Sep 26 j 10:52	10°♑58'42	
	-5386 Jun 30 j 16:14	0°♕			-5381 Nov 30 j 06:27	0°♒	
	-5386 Aug 17 j 07:38	0°♌		asc. node	-5381 Dec 30 j 09:42	15°♒22'43	
	-5386 Oct 04 j 15:23	0°♍			-5380 Jan 25 j 16:36	0°♑	
	-5386 Nov 24 j 03:59	0°♎			-5380 Mar 16 j 15:17	0°♒	
	-5385 Jan 24 j 02:22	0°♏			-5380 May 04 j 05:39	0°♓	
retrograde	-5385 Mar 05 j 02:01	8°♏23'32		evening set	-5380 Jun 18 j 01:28	28°♓53'37	
opposition	-5385 Apr 05 j 12:54	2°♏53'36	2°10'41		-5380 Jun 19 j 17:42	0°♌	
greatest brilliancy	-5385 Apr 06 j 09:12	2°♏38'46	-2.7m	max. Earth dist.	-5380 Jul 08 j 02:13	12°♌14'43	2.56837 AU
min. Earth dist.	-5385 Apr 11 j 17:43	1°♏05'18	0.40728 AU		-5380 Aug 03 j 01:16	0°♍	
	-5385 Apr 15 j 16:18	30°♏					
desc. node	-5385 May 06 j 10:57	26°♏37'03		conjunction	-5380 Aug 05 j 13:09	1°♍44'03	1°10'06
direct	-5385 May 09 j 00:30	26°♏34'19		minimum elong	-5380 Aug 05 j 13:46	1°♍45'07	1°10'24
	-5385 May 31 j 22:18	0°♎			-5380 Sep 14 j 06:31	0°♎	
	-5385 Jul 31 j 10:28	0°♏		morning rise	-5380 Sep 24 j 18:12	7°♏39'39	
	-5385 Sep 14 j 11:11	0°♐			-5380 Oct 24 j 18:32	0°♏	
	-5385 Oct 27 j 13:00	0°♑			-5380 Dec 03 j 03:02	0°♐	
	-5385 Dec 09 j 22:31	0°♒		desc. node	-5380 Dec 26 j 11:45	18°♐00'02	
	-5384 Jan 23 j 12:00	0°♓			-5379 Jan 11 j 01:38	0°♑	
	-5384 Mar 09 j 08:39	0°♔			-5379 Feb 19 j 11:52	0°♒	
asc. node	-5384 Mar 26 j 12:29	11°♔03'01			-5379 Apr 01 j 13:26	0°♑	
evening set	-5384 Apr 01 j 20:07	15°♔06'12			-5379 May 16 j 04:45	0°♒	
	-5384 Apr 25 j 03:29	0°♕			-5379 Jul 10 j 03:25	0°♓	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 3

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

retrograde	-5379 Aug 24 j 15:48	11° H 14'29			-5374 Oct 03 j 03:55	0° L	
min. Earth dist.	-5379 Sep 29 j 03:53	3° H 00'56	0.61978 AU		-5374 Nov 10 j 10:18	0° M	
opposition	-5379 Oct 03 j 11:10	1° H 17'35	-1°-44'-53	evening set	-5374 Dec 02 j 03:27	16° M 52'04	
greatest brilliancy	-5379 Oct 03 j 02:27	1° H 26'18	-1.5m		-5374 Dec 19 j 06:40	0° J	
	-5379 Oct 06 j 17:30	30° R			-5373 Jan 28 j 12:13	0° Z	
direct	-5379 Nov 10 j 10:56	22° \approx 21'57					
asc. node	-5379 Nov 16 j 11:41	22° \approx 35'17		conjunction	-5373 Feb 02 j 13:21	3° Z 40'15	-1°-7'-44
	-5379 Dec 19 j 03:52	0° H		minimum elong	-5373 Feb 02 j 14:19	3° Z 42'00	1°08'03
	-5378 Feb 21 j 08:36	0° Y			-5373 Mar 11 j 16:13	0° \approx	
	-5378 Apr 14 j 05:18	0° B		max. Earth dist.	-5373 Mar 14 j 19:01	2° \approx 09'30	2.51334 AU
	-5378 May 31 j 19:24	0° II		morning rise	-5373 Apr 01 j 20:42	14° \approx 31'17	
	-5378 Jul 15 j 07:06	0° S			-5373 Apr 25 j 00:23	0° H	
evening set	-5378 Aug 01 j 07:55	11° S 59'37			-5373 Jun 10 j 13:17	0° Y	
max. Earth dist.	-5378 Aug 17 j 06:00	23° S 26'58	2.45167 AU	asc. node	-5373 Jul 09 j 13:11	17° Y 58'17	
	-5378 Aug 26 j 05:04	0° Q			-5373 Jul 29 j 12:59	0° B	
					-5373 Sep 21 j 02:27	0° II	
conjunction	-5378 Sep 24 j 12:46	21° Q 54'02	0°34'27	retrograde	-5373 Dec 13 j 07:04	27° II 25'33	
minimum elong	-5378 Sep 24 j 14:49	21° Q 57'56	0°34'37	opposition	-5372 Jan 19 j 02:55	19° II 21'40	5°18'37
	-5378 Oct 05 j 04:01	0° M		greatest brilliancy	-5372 Jan 20 j 17:16	18° II 45'39	-1.6m
	-5378 Nov 12 j 21:34	0° L		min. Earth dist.	-5372 Jan 25 j 22:32	16° II 48'32	0.57709 AU
desc. node	-5378 Nov 13 j 08:03	0° L 20'29		direct	-5372 Feb 28 j 09:45	9° II 44'54	
morning rise	-5378 Nov 24 j 03:49	8° L 48'35			-5372 May 02 j 18:25	0° S	
	-5378 Dec 21 j 05:44	0° M			-5372 Jun 20 j 20:50	0° Q	
	-5377 Jan 29 j 01:29	0° J		desc. node	-5372 Jul 05 j 01:37	9° Q 47'23	
	-5377 Mar 10 j 05:58	0° Z			-5372 Aug 02 j 00:23	0° M	
	-5377 Apr 21 j 17:59	0° \approx			-5372 Sep 10 j 15:33	0° L	
	-5377 Jun 06 j 22:21	0° H			-5372 Oct 19 j 14:30	0° M	
	-5377 Jul 31 j 06:03	0° Y			-5372 Nov 28 j 02:01	0° J	
retrograde	-5377 Sep 29 j 00:18	16° Y 49'41			-5371 Jan 07 j 22:06	0° Z	
asc. node	-5377 Oct 04 j 14:31	16° Y 37'11		evening set	-5371 Jan 30 j 01:17	15° Z 43'41	
opposition	-5377 Nov 07 j 22:18	7° Y 04'06	1°16'52		-5371 Feb 19 j 14:29	0° \approx	
min. Earth dist.	-5377 Nov 07 j 07:59	7° Y 18'30	0.66800 AU				
greatest brilliancy	-5377 Nov 07 j 20:31	7° Y 05'54	-1.3m	conjunction	-5371 Mar 25 j 05:13	22° \approx 43'02	0°-34'-21
	-5377 Nov 28 j 00:25	30° R		minimum elong	-5371 Mar 25 j 06:41	22° \approx 45'29	0°34'34
direct	-5377 Dec 18 j 03:19	27° H 21'38			-5371 Apr 05 j 05:03	0° H	
	-5376 Jan 08 j 22:07	0° Y		max. Earth dist.	-5371 Apr 14 j 15:23	6° H 11'45	2.61477 AU
	-5376 Mar 20 j 06:37	0° B		morning rise	-5371 May 14 j 15:02	25° H 37'44	
	-5376 May 10 j 05:44	0° II			-5371 May 21 j 10:45	0° Y	
	-5376 Jun 24 j 17:56	0° S		asc. node	-5371 May 26 j 10:11	3° Y 10'46	
	-5376 Aug 05 j 20:46	0° Q			-5371 Jul 07 j 20:46	0° B	
	-5376 Sep 14 j 16:42	0° M			-5371 Aug 25 j 07:59	0° II	
evening set	-5376 Sep 25 j 05:27	8° M 08'06			-5371 Oct 14 j 19:01	0° S	
desc. node	-5376 Sep 30 j 05:21	12° M 01'01			-5371 Dec 11 j 11:41	0° Q	
	-5376 Oct 23 j 04:48	0° L		retrograde	-5370 Feb 05 j 02:29	14° Q 31'31	
				opposition	-5370 Mar 10 j 05:38	8° Q 13'48	4°19'08
conjunction	-5376 Nov 27 j 19:45	28° L 01'56	0°-40'-29	greatest brilliancy	-5370 Mar 12 j 02:49	7° Q 37'18	-2.3m
minimum elong	-5376 Nov 27 j 16:34	27° L 55'41	0°40'36	min. Earth dist.	-5370 Mar 18 j 12:36	5° Q 34'01	0.45292 AU
	-5376 Nov 30 j 07:57	0° M		direct	-5370 Apr 15 j 12:58	0° Q 35'47	
max. Earth dist.	-5375 Jan 03 j 03:26	26° M 16'33	2.38781 AU	desc. node	-5370 May 23 j 03:16	9° Q 10'58	
	-5375 Jan 08 j 00:04	0° J			-5370 Jul 01 j 10:00	0° M	
morning rise	-5375 Feb 03 j 02:22	19° J 42'31			-5370 Aug 15 j 04:25	0° L	
	-5375 Feb 17 j 00:38	0° Z			-5370 Sep 25 j 18:14	0° M	
	-5375 Mar 31 j 01:49	0° \approx			-5370 Nov 06 j 01:41	0° J	
	-5375 May 14 j 16:47	0° H			-5370 Dec 18 j 08:10	0° Z	
	-5375 Jul 01 j 17:02	0° Y			-5369 Jan 31 j 03:15	0° \approx	
asc. node	-5375 Aug 21 j 15:04	28° Y 09'32		evening set	-5369 Mar 17 j 18:16	0° H 10'10	
	-5375 Aug 25 j 09:06	0° B			-5369 Mar 17 j 12:02	0° H	
retrograde	-5375 Nov 02 j 11:54	20° B 37'25		asc. node	-5369 Apr 13 j 05:46	17° H 18'23	
opposition	-5375 Dec 11 j 10:28	11° B 29'37	3°44'41		-5369 May 03 j 00:39	0° Y	
greatest brilliancy	-5375 Dec 11 j 21:38	11° B 18'35	-1.3m				
min. Earth dist.	-5375 Dec 14 j 14:32	10° B 14'31	0.65384 AU	conjunction	-5369 May 05 j 21:01	1° Y 49'20	0°12'44
direct	-5374 Jan 21 j 13:12	1° B 28'53		minimum elong	-5369 May 05 j 20:32	1° Y 48'34	0°12'43
	-5374 Apr 14 j 15:35	0° II		behind sun begin	-5369 May 05 j 08:40	1° Y 29'36	
	-5374 Jun 02 j 22:51	0° S		behind sun end	-5369 May 06 j 08:23	2° Y 07'31	
	-5374 Jul 16 j 05:59	0° Q		max. Earth dist.	-5369 May 10 j 00:03	4° Y 27'39	2.66510 AU
desc. node	-5374 Aug 18 j 02:44	24° Q 23'04			-5369 Jun 19 j 00:33	0° B	
	-5374 Aug 25 j 11:46	0° M		morning rise	-5369 Jun 21 j 08:29	1° B 29'14	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 4

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5369 Aug 04 j 20:57	0°♊		asc. node	-5364 Dec 03 j 01:46	15°≈28'01	
	-5369 Sep 20 j 07:34	0°♋			-5363 Jan 05 j 23:56	0°♌	
	-5369 Nov 05 j 14:05	0°♍			-5363 Mar 02 j 19:31	0°♎	
	-5369 Dec 22 j 13:24	0°♏			-5363 Apr 21 j 23:41	0°♐	
	-5368 Feb 11 j 01:35	0°♑			-5363 Jun 08 j 00:55	0°♒	
desc. node	-5368 Apr 09 j 06:00	23°♑03'30		evening set	-5363 Jul 14 j 02:40	24°♒15'16	
retrograde	-5368 Apr 22 j 06:37	24°♑08'29			-5363 Jul 22 j 10:00	0°♋	
min. Earth dist.	-5368 May 21 j 17:37	19°♑17'23	0.37802 AU	max. Earth dist.	-5363 Jul 29 j 20:46	5°♋12'21	2.50081 AU
opposition	-5368 May 23 j 01:10	18°♑56'15	-3°-17'-10		-5363 Sep 02 j 10:13	0°♌	
greatest brilliancy	-5368 May 22 j 18:06	19°♑00'59	-2.9m				
direct	-5368 Jun 22 j 03:31	13°♑54'55		conjunction	-5363 Sep 03 j 10:07	0°♌43'47	0°54'34
	-5368 Aug 16 j 04:23	0°♍		minimum elong	-5363 Sep 03 j 12:06	0°♌47'25	0°54'49
	-5368 Oct 07 j 12:24	0°♎			-5363 Oct 12 j 13:31	0°♏	
	-5368 Nov 23 j 14:46	0°♐		morning rise	-5363 Oct 29 j 04:47	12°♏44'19	
	-5367 Jan 09 j 03:57	0°≈			-5363 Nov 20 j 11:58	0°♑	
	-5367 Feb 25 j 04:09	0°♌		desc. node	-5363 Nov 30 j 04:02	7°♑31'37	
asc. node	-5367 Feb 28 j 01:55	1°♌50'39			-5363 Dec 29 j 00:22	0°♍	
	-5367 Apr 13 j 13:36	0°♎			-5362 Feb 05 j 23:39	0°♎	
evening set	-5367 Apr 25 j 20:28	7°♎46'53			-5362 Mar 18 j 08:37	0°♐	
	-5367 May 30 j 18:02	0°♐			-5362 Apr 30 j 07:12	0°≈	
max. Earth dist.	-5367 Jun 01 j 19:21	1°♐18'58	2.66107 AU		-5362 Jun 16 j 23:51	0°♌	
					-5362 Aug 21 j 11:04	0°♎	
conjunction	-5367 Jun 11 j 20:47	7°♐46'41	0°52'08	retrograde	-5362 Sep 15 j 12:48	3°♎40'35	
minimum elong	-5367 Jun 11 j 19:28	7°♐44'34	0°52'18		-5362 Oct 08 j 19:48	30°♎	
	-5367 Jul 16 j 01:20	0°♊		asc. node	-5362 Oct 21 j 03:53	25°♌32'40	
morning rise	-5367 Jul 27 j 09:42	7°♊28'50		min. Earth dist.	-5362 Oct 23 j 12:03	24°♌36'24	0.65636 AU
	-5367 Aug 30 j 01:01	0°♋		opposition	-5362 Oct 25 j 13:37	23°♌46'29	0°10'10
	-5367 Oct 12 j 15:17	0°♌		greatest brilliancy	-5362 Oct 25 j 13:02	23°♌47'04	-1.4m
	-5367 Nov 24 j 01:16	0°♍		direct	-5362 Dec 04 j 01:40	14°♌18'47	
	-5366 Jan 04 j 17:28	0°♑			-5361 Feb 01 j 05:37	0°♎	
	-5366 Feb 15 j 12:28	0°♒			-5361 Mar 31 j 02:22	0°♐	
desc. node	-5366 Feb 25 j 06:53	6°♒52'41			-5361 May 19 j 06:41	0°♊	
	-5366 Mar 31 j 11:55	0°♎			-5361 Jul 03 j 06:22	0°♋	
	-5366 May 26 j 12:57	0°♐			-5361 Aug 14 j 06:09	0°♌	
retrograde	-5366 Jun 26 j 21:42	6°♐18'49		evening set	-5361 Sep 02 j 15:18	14°♌25'37	
min. Earth dist.	-5366 Jul 25 j 04:26	0°♐52'09	0.46632 AU		-5361 Sep 23 j 02:32	0°♍	
	-5366 Jul 27 j 17:14	30°♒		max. Earth dist.	-5361 Oct 09 j 18:57	12°♍53'47	2.38464 AU
greatest brilliancy	-5366 Jul 31 j 03:49	28°♒47'35	-2.3m	desc. node	-5361 Oct 17 j 23:31	19°♍16'43	
opposition	-5366 Aug 02 j 06:38	28°♒02'56	-6°-1'-13		-5361 Oct 31 j 16:09	0°♑	
direct	-5366 Sep 04 j 03:06	21°♒20'00					
	-5366 Oct 14 j 05:05	0°♐		conjunction	-5361 Nov 01 j 15:41	0°♑46'10	0°-10'-46
	-5366 Dec 14 j 07:21	0°≈		minimum elong	-5361 Nov 01 j 14:45	0°♑44'20	0°10'45
asc. node	-5365 Jan 16 j 00:47	18°≈49'02		behind sun begin	-5361 Oct 31 j 18:04	0°♑03'44	
	-5365 Feb 03 j 21:27	0°♌		behind sun end	-5361 Nov 02 j 11:27	1°♑24'57	
	-5365 Mar 25 j 07:45	0°♎			-5361 Dec 08 j 20:31	0°♍	
	-5365 May 12 j 08:05	0°♐		morning rise	-5360 Jan 07 j 12:17	23°♍03'59	
evening set	-5365 Jun 03 j 11:30	14°♐10'57			-5360 Jan 16 j 13:03	0°♎	
max. Earth dist.	-5365 Jun 27 j 11:43	29°♐51'59	2.60434 AU		-5360 Feb 25 j 13:42	0°♐	
	-5365 Jun 27 j 16:34	0°♊			-5360 Apr 07 j 16:19	0°≈	
					-5360 May 22 j 15:22	0°♌	
conjunction	-5365 Jul 20 j 22:30	15°♊31'59	1°11'17		-5360 Jul 10 j 22:44	0°♎	
minimum elong	-5365 Jul 20 j 22:14	15°♊31'32	1°11'34	asc. node	-5360 Sep 07 j 06:04	28°♎34'25	
	-5365 Aug 11 j 02:34	0°♋			-5360 Sep 11 j 03:49	0°♐	
morning rise	-5365 Sep 06 j 20:47	18°♋44'45		retrograde	-5360 Oct 19 j 09:38	7°♐35'28	
	-5365 Sep 22 j 14:11	0°♌			-5360 Nov 23 j 05:13	30°♒	
	-5365 Nov 02 j 10:46	0°♍		opposition	-5360 Nov 27 j 20:24	28°♎10'10	2°52'05
	-5365 Dec 12 j 04:46	0°♑		greatest brilliancy	-5360 Nov 28 j 00:09	28°♎06'26	-1.3m
desc. node	-5364 Jan 13 j 06:53	24°♑28'27		min. Earth dist.	-5360 Nov 29 j 12:53	27°♎29'49	0.66687 AU
	-5364 Jan 20 j 12:59	0°♒		direct	-5359 Jan 07 j 18:46	18°♎12'59	
	-5364 Feb 29 j 10:35	0°♎			-5359 Feb 26 j 05:09	0°♐	
	-5364 Apr 11 j 08:15	0°♐			-5359 Apr 25 j 10:08	0°♊	
	-5364 May 28 j 11:47	0°≈			-5359 Jun 11 j 14:53	0°♋	
retrograde	-5364 Aug 09 j 20:54	25°≈53'53			-5359 Jul 24 j 07:01	0°♌	
min. Earth dist.	-5364 Sep 12 j 13:24	18°≈19'46	0.58502 AU		-5359 Sep 02 j 07:09	0°♍	
greatest brilliancy	-5364 Sep 17 j 10:28	16°≈24'19	-1.7m	desc. node	-5359 Sep 03 j 20:14	1°♍11'12	
opposition	-5364 Sep 18 j 06:01	16°≈05'02	-3°-2'-12		-5359 Oct 10 j 20:31	0°♑	
direct	-5364 Oct 25 j 00:44	7°≈36'59		evening set	-5359 Nov 05 j 09:41	20°♑05'45	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 5

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5359 Nov 18 j 00:29	0°♌				-5354 Aug 12 j 06:33	0°♈	
	-5359 Dec 26 j 18:01	0°♏				-5354 Sep 28 j 18:38	0°♎	
						-5354 Nov 16 j 06:41	0°♏	
conjunction	-5358 Jan 09 j 04:01	10°♏10'39	-1°-7'-13			-5353 Jan 07 j 18:09	0°♏	
minimum elong	-5358 Jan 09 j 02:43	10°♏08'13	1°07'31	retrograde		-5353 Mar 22 j 11:04	24°♏09'44	
	-5358 Feb 04 j 20:27	0°♎		opposition		-5353 Apr 22 j 06:11	18°♏59'45	0°21'00
max. Earth dist.	-5358 Feb 25 j 01:45	14°♎37'03	2.46308 AU	greatest brilliancy		-5353 Apr 22 j 08:41	18°♏58'01	-2.8m
morning rise	-5358 Mar 12 j 12:42	25°♎32'58		min. Earth dist.		-5353 Apr 26 j 06:08	17°♏53'54	0.38887 AU
	-5358 Mar 18 j 21:47	0°♎		desc. node		-5353 Apr 26 j 21:52	17°♏43'15	
	-5358 May 02 j 06:13	0°♏		direct		-5353 May 24 j 00:48	13°♏21'51	
	-5358 Jun 18 j 03:16	0°♏				-5353 Jul 18 j 01:37	0°♎	
asc. node	-5358 Jul 26 j 05:43	22°♏59'26				-5353 Sep 06 j 02:48	0°♌	
	-5358 Aug 07 j 09:50	0°♏				-5353 Oct 20 j 22:17	0°♏	
	-5358 Oct 05 j 17:15	0°♈				-5353 Dec 04 j 06:01	0°♎	
retrograde	-5358 Nov 26 j 09:04	12°♈34'58				-5352 Jan 18 j 08:36	0°♎	
opposition	-5357 Jan 03 j 04:28	4°♈02'07	4°51'31			-5352 Mar 04 j 13:20	0°♏	
greatest brilliancy	-5357 Jan 04 j 07:27	3°♈36'06	-1.5m	asc. node		-5352 Mar 16 j 17:51	7°♏49'09	
min. Earth dist.	-5357 Jan 08 j 15:07	1°♈56'26	0.61434 AU	evening set		-5352 Apr 10 j 17:39	23°♏46'23	
	-5357 Jan 13 j 21:02	30°♏				-5352 Apr 20 j 12:25	0°♏	
direct	-5357 Feb 13 j 01:34	24°♏08'38		max. Earth dist.		-5352 May 23 j 16:46	21°♏08'02	2.66916 AU
	-5357 Mar 17 j 10:53	0°♈						
	-5357 May 17 j 09:16	0°♎		conjunction		-5352 May 28 j 06:09	24°♏02'39	0°38'36
	-5357 Jul 01 j 22:38	0°♏		minimum elong		-5352 May 28 j 04:57	24°♏00'44	0°38'42
desc. node	-5357 Jul 22 j 19:08	14°♏57'54				-5352 Jun 06 j 13:36	0°♏	
	-5357 Aug 12 j 00:30	0°♏		morning rise		-5352 Jul 12 j 19:12	23°♏21'04	
	-5357 Sep 20 j 03:06	0°♎				-5352 Jul 23 j 00:22	0°♈	
	-5357 Oct 28 j 17:00	0°♌				-5352 Sep 06 j 10:37	0°♎	
	-5357 Dec 06 j 20:22	0°♏				-5352 Oct 20 j 19:32	0°♏	
evening set	-5356 Jan 09 j 14:36	25°♏05'00				-5352 Dec 03 j 09:07	0°♏	
	-5356 Jan 16 j 08:52	0°♎				-5351 Jan 15 j 17:12	0°♎	
	-5356 Feb 27 j 18:39	0°♎				-5351 Mar 01 j 07:12	0°♌	
				desc. node		-5351 Mar 14 j 01:13	8°♌05'57	
conjunction	-5356 Mar 06 j 18:07	5°♎29'09	0°-50'-51			-5351 Apr 22 j 16:08	0°♏	
minimum elong	-5356 Mar 06 j 20:05	5°♎32'31	0°51'07	retrograde		-5351 Jun 04 j 15:31	11°♏05'44	
max. Earth dist.	-5356 Apr 03 j 16:07	24°♎20'03	2.58082 AU	min. Earth dist.		-5351 Jul 01 j 09:00	6°♏25'52	0.41860 AU
	-5356 Apr 12 j 05:07	0°♏		greatest brilliancy		-5351 Jul 06 j 18:06	4°♏45'25	-2.6m
morning rise	-5356 Apr 28 j 16:49	10°♏49'10		opposition		-5351 Jul 08 j 18:39	4°♏07'15	-6°-15'-28
	-5356 May 28 j 11:17	0°♏				-5351 Jul 23 j 20:25	30°♌	
asc. node	-5356 Jun 12 j 02:25	9°♏16'46		direct		-5351 Aug 08 j 21:24	28°♌18'26	
	-5356 Jul 15 j 07:01	0°♏				-5351 Aug 25 j 08:23	0°♏	
	-5356 Sep 03 j 00:03	0°♈				-5351 Nov 03 j 18:52	0°♎	
	-5356 Oct 27 j 07:58	0°♎				-5351 Dec 25 j 03:31	0°♎	
retrograde	-5355 Jan 12 j 05:49	24°♎26'04		asc. node		-5350 Feb 01 j 14:52	23°♎27'17	
opposition	-5355 Feb 16 j 01:59	17°♎20'57	5°14'57			-5350 Feb 12 j 06:17	0°♏	
greatest brilliancy	-5355 Feb 18 j 04:21	16°♎36'57	-2.0m			-5350 Apr 01 j 16:15	0°♏	
min. Earth dist.	-5355 Feb 24 j 11:14	14°♎26'20	0.50420 AU	evening set		-5350 May 19 j 09:47	0°♏04'54	
direct	-5355 Mar 26 j 11:21	8°♎40'39				-5350 May 19 j 06:42	0°♏	
	-5355 May 29 j 17:00	0°♏		max. Earth dist.		-5350 Jun 17 j 00:31	18°♏30'33	2.63262 AU
desc. node	-5355 Jun 08 j 19:03	5°♏49'42				-5350 Jul 04 j 13:34	0°♈	
	-5355 Jul 15 j 21:05	0°♏						
	-5355 Aug 26 j 09:37	0°♎		conjunction		-5350 Jul 05 j 08:41	0°♈31'32	1°07'07
	-5355 Oct 05 j 11:24	0°♌		minimum elong		-5350 Jul 05 j 07:46	0°♈30'02	1°07'23
	-5355 Nov 14 j 19:06	0°♏				-5350 Aug 18 j 03:34	0°♎	
	-5355 Dec 26 j 07:52	0°♎		morning rise		-5350 Aug 20 j 20:25	1°♎51'27	
evening set	-5354 Feb 07 j 13:28	0°♎				-5350 Sep 29 j 23:43	0°♏	
	-5354 Feb 28 j 17:41	14°♎15'28				-5350 Nov 10 j 07:52	0°♏	
	-5354 Mar 24 j 13:04	0°♏				-5350 Dec 20 j 15:19	0°♎	
						-5349 Jan 29 j 14:32	0°♌	
conjunction	-5354 Apr 20 j 09:53	17°♏28'31	0°-5'-26	desc. node		-5349 Jan 30 j 00:27	0°♌18'34	
minimum elong	-5354 Apr 20 j 10:06	17°♏28'52	0°05'32			-5349 Mar 11 j 07:59	0°♏	
behind sun begin	-5354 Apr 19 j 14:52	16°♏57'49				-5349 Apr 23 j 22:29	0°♎	
behind sun end	-5354 Apr 21 j 05:20	17°♏59'54				-5349 Jun 17 j 14:09	0°♎	
asc. node	-5354 Apr 29 j 22:33	23°♏36'58		retrograde		-5349 Jul 25 j 20:30	8°♎46'58	
max. Earth dist.	-5354 Apr 30 j 12:00	23°♏58'35	2.65190 AU	min. Earth dist.		-5349 Aug 26 j 12:01	1°♎59'02	0.54216 AU
	-5354 May 09 j 21:15	0°♏				-5349 Aug 31 j 16:18	30°♌	
morning rise	-5354 Jun 07 j 00:52	17°♏58'09		greatest brilliancy		-5349 Sep 01 j 01:45	29°♎50'53	-1.9m
	-5354 Jun 25 j 23:08	0°♏		opposition		-5349 Sep 02 j 10:49	29°♎19'08	-4°-20'-11

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 6

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

direct	-5349 Oct 07 j 18:59	21°☾25'58			-5343 Jan 03 j 05:43	0°☾	
	-5349 Nov 17 j 10:26	0°≈		max. Earth dist.	-5343 Jan 29 j 00:40	19°☾28'59	2.41189 AU
asc. node	-5349 Dec 20 j 15:44	14°≈36'05			-5343 Feb 12 j 06:05	0°☾	
	-5348 Jan 19 j 01:49	0°☿		morning rise	-5343 Feb 17 j 10:49	3°☾47'56	
	-5348 Mar 11 j 07:45	0°♊			-5343 Mar 26 j 05:59	0°≈	
	-5348 Apr 29 j 09:55	0°♈			-5343 May 09 j 16:42	0°☿	
	-5348 Jun 15 j 02:45	0°♊			-5343 Jun 26 j 03:21	0°♊	
evening set	-5348 Jun 27 j 06:28	8°♊04'04		asc. node	-5343 Aug 11 j 21:09	26°♊57'23	
max. Earth dist.	-5348 Jul 15 j 07:59	20°♊16'08	2.54593 AU		-5343 Aug 17 j 14:22	0°♈	
	-5348 Jul 29 j 11:09	0°☾		retrograde	-5343 Nov 10 j 21:02	28°♈42'19	
				opposition	-5343 Dec 19 j 11:31	19°♈45'37	4°11'43
conjunction	-5348 Aug 15 j 13:18	11°☾59'11	1°06'32	greatest brilliancy	-5343 Dec 20 j 03:52	19°♈29'36	-1.4m
minimum elong	-5348 Aug 15 j 14:28	12°☾01'16	1°06'50	min. Earth dist.	-5343 Dec 23 j 11:16	18°♈11'50	0.64246 AU
	-5348 Sep 09 j 14:55	0°♊		direct	-5342 Jan 29 j 14:25	9°♈45'22	
morning rise	-5348 Oct 06 j 10:31	19°♊48'18			-5342 Apr 06 j 08:52	0°♊	
	-5348 Oct 19 j 23:44	0°♊			-5342 May 27 j 23:20	0°☾	
	-5348 Nov 28 j 04:21	0°♊			-5342 Jul 10 j 21:40	0°♊	
desc. node	-5348 Dec 16 j 21:45	14°♊29'30		desc. node	-5342 Aug 08 j 12:05	21°♊00'49	
	-5347 Jan 05 j 22:39	0°♊			-5342 Aug 20 j 09:17	0°♊	
	-5347 Feb 14 j 03:44	0°☾			-5342 Sep 28 j 04:27	0°♊	
	-5347 Mar 26 j 21:07	0°☾			-5342 Nov 05 j 12:47	0°♊	
	-5347 May 09 j 15:39	0°≈			-5342 Dec 14 j 10:44	0°☾	
	-5347 Jun 29 j 11:59	0°☿		evening set	-5342 Dec 16 j 17:44	1°☾44'18	
retrograde	-5347 Sep 01 j 18:43	19°☿55'29			-5341 Jan 23 j 17:53	0°☾	
min. Earth dist.	-5347 Oct 08 j 05:16	11°☿22'43	0.63532 AU				
opposition	-5347 Oct 11 j 17:44	9°☿57'54	-1°-1'-27	conjunction	-5341 Feb 15 j 06:55	16°☾12'23	-1°-3'-28
greatest brilliancy	-5347 Oct 11 j 13:30	10°☿02'09	-1.4m	minimum elong	-5341 Feb 15 j 08:37	16°☾15'24	1°03'47
asc. node	-5347 Nov 06 j 18:22	1°☿51'21			-5341 Mar 06 j 22:55	0°≈	
direct	-5347 Nov 19 j 08:02	0°☿49'32		max. Earth dist.	-5341 Mar 23 j 03:06	11°≈06'46	2.53945 AU
	-5346 Feb 14 j 09:19	0°♊		morning rise	-5341 Apr 12 j 11:17	24°≈48'54	
	-5346 Apr 08 j 19:44	0°♈			-5341 Apr 20 j 06:47	0°☿	
	-5346 May 26 j 22:08	0°♊			-5341 Jun 05 j 15:40	0°♊	
	-5346 Jul 10 j 14:15	0°☾		asc. node	-5341 Jun 29 j 19:15	15°♊07'51	
evening set	-5346 Aug 12 j 10:36	23°☾20'16			-5341 Jul 24 j 02:21	0°♈	
	-5346 Aug 21 j 13:27	0°♊			-5341 Sep 13 j 19:16	0°♊	
max. Earth dist.	-5346 Aug 30 j 18:48	6°♊48'57	2.42512 AU		-5341 Nov 17 j 00:54	0°☾	
	-5346 Sep 30 j 11:45	0°♊		retrograde	-5341 Dec 23 j 17:33	6°☾56'09	
					-5340 Jan 26 j 16:50	30°♊	
conjunction	-5346 Oct 07 j 13:13	5°♊25'22	0°19'34	opposition	-5340 Jan 28 j 22:48	29°♊10'51	5°25'12
minimum elong	-5346 Oct 07 j 14:38	5°♊28'06	0°19'42	greatest brilliancy	-5340 Jan 30 j 18:50	28°♊30'19	-1.8m
desc. node	-5346 Nov 03 j 18:31	26°♊33'50		min. Earth dist.	-5340 Feb 05 j 11:04	26°♊25'47	0.55318 AU
	-5346 Nov 08 j 03:57	0°♊		direct	-5340 Mar 08 j 17:48	19°♊48'59	
morning rise	-5346 Dec 09 j 20:09	24°♊50'21			-5340 Apr 20 j 12:49	0°☾	
	-5346 Dec 16 j 10:21	0°♊			-5340 Jun 13 j 17:07	0°♊	
	-5345 Jan 24 j 04:02	0°☾		desc. node	-5340 Jun 25 j 13:07	7°♊50'49	
	-5345 Mar 05 j 05:54	0°☾			-5340 Jul 26 j 23:17	0°♊	
	-5345 Apr 16 j 12:25	0°≈			-5340 Sep 05 j 01:58	0°♊	
	-5345 Jun 01 j 01:53	0°☿			-5340 Oct 14 j 07:51	0°♊	
	-5345 Jul 22 j 18:19	0°♊			-5340 Nov 23 j 00:21	0°☾	
asc. node	-5345 Sep 24 j 20:36	23°♊50'26			-5339 Jan 03 j 00:37	0°☾	
retrograde	-5345 Oct 06 j 18:06	24°♊42'19		evening set	-5339 Feb 10 j 08:41	26°☾55'22	
opposition	-5345 Nov 15 j 13:38	15°♊02'57	1°53'28		-5339 Feb 14 j 20:13	0°≈	
greatest brilliancy	-5345 Nov 15 j 12:52	15°♊03'43	-1.3m		-5339 Mar 31 j 12:54	0°☿	
min. Earth dist.	-5345 Nov 15 j 18:45	14°♊57'49	0.67024 AU				
direct	-5345 Dec 26 j 02:36	5°♊14'05		conjunction	-5339 Apr 04 j 02:49	2°☿21'18	0°-23'-52
	-5344 Mar 12 j 22:07	0°♈		minimum elong	-5339 Apr 04 j 03:51	2°☿23'00	0°24'03
	-5344 May 04 j 16:05	0°♊		max. Earth dist.	-5339 Apr 20 j 16:53	13°☿11'22	2.63037 AU
	-5344 Jun 19 j 16:44	0°☾		asc. node	-5339 May 16 j 14:37	29°☿53'48	
	-5344 Aug 01 j 00:15	0°♊			-5339 May 16 j 18:29	0°♊	
	-5344 Sep 09 j 21:47	0°♊		morning rise	-5339 May 23 j 08:46	4°♊13'05	
desc. node	-5344 Sep 20 j 14:23	8°♊15'03			-5339 Jul 03 j 00:33	0°♈	
evening set	-5344 Oct 09 j 15:56	23°♊07'02			-5339 Aug 19 j 23:31	0°♊	
	-5344 Oct 18 j 10:27	0°♊			-5339 Oct 08 j 01:56	0°☾	
	-5344 Nov 25 j 13:42	0°♊			-5339 Nov 29 j 19:05	0°♊	
				retrograde	-5338 Feb 20 j 08:38	27°♊53'57	
conjunction	-5344 Dec 13 j 10:14	13°♊56'41	0°-53'-49	opposition	-5338 Mar 24 j 12:17	22°♊03'20	3°16'22
minimum elong	-5344 Dec 13 j 06:59	13°♊50'21	0°54'01	greatest brilliancy	-5338 Mar 25 j 21:43	21°♊37'42	-2.5m

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 7

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

min. Earth dist.	-5338 Mar 31 j 22:05	19°04'41"	0.42633 AU	conjunction	-5333 Jul 30 j 07:06	25°02'43"	1°11'19"
direct	-5338 Apr 28 j 07:50	15°00'41"		minimum elong	-5333 Jul 30 j 07:19	25°03'06"	1°11'37"
desc. node	-5338 May 13 j 14:45	16°04'23"			-5333 Aug 06 j 11:35	0°00'	
	-5338 Jun 18 j 08:23	0°00'		morning rise	-5333 Sep 17 j 08:48	29°03'38"	
	-5338 Aug 06 j 23:20	0°00'			-5333 Sep 17 j 20:40	0°00'	
	-5338 Sep 19 j 02:21	0°00'			-5333 Oct 28 j 13:04	0°00'	
	-5338 Oct 31 j 05:30	0°00'			-5333 Dec 07 j 02:02	0°00'	
	-5338 Dec 13 j 00:39	0°00'		desc. node	-5332 Jan 03 j 16:24	21°00'10"	
	-5337 Jan 26 j 04:05	0°00'			-5332 Jan 15 j 04:39	0°00'	
	-5337 Mar 12 j 18:17	0°00'			-5332 Feb 23 j 18:38	0°00'	
evening set	-5337 Mar 27 j 01:49	9°00'15"			-5332 Apr 05 j 02:17	0°00'	
asc. node	-5337 Apr 03 j 10:20	13°00'59"			-5332 May 20 j 10:48	0°00'	
	-5337 Apr 28 j 09:35	0°00'			-5332 Jul 19 j 21:04	0°00'	
				retrograde	-5332 Aug 18 j 10:46	5°00'15"	
conjunction	-5337 May 14 j 12:16	10°00'17"	0°22'45"		-5332 Sep 15 j 02:29	30°00'00"	
minimum elong	-5337 May 14 j 11:27	10°00'15"	0°22'47"	min. Earth dist.	-5332 Sep 22 j 04:03	27°00'19"	0.60521 AU
max. Earth dist.	-5337 May 15 j 11:29	10°00'54"	2.66888 AU	opposition	-5332 Sep 27 j 02:55	25°00'21"	-2°-17'-14"
	-5337 Jun 14 j 09:31	0°00'		greatest brilliancy	-5332 Sep 26 j 13:57	25°00'34"	-1.6m
morning rise	-5337 Jun 29 j 12:45	9°00'41"		direct	-5332 Nov 03 j 14:49	16°00'37"	
	-5337 Jul 31 j 01:55	0°00'		asc. node	-5332 Nov 23 j 08:36	18°00'51"	
	-5337 Sep 15 j 02:30	0°00'			-5332 Dec 27 j 01:09	0°00'	
	-5337 Oct 30 j 13:25	0°00'			-5331 Feb 24 j 18:39	0°00'	
	-5337 Dec 14 j 22:18	0°00'			-5331 Apr 16 j 21:31	0°00'	
	-5336 Jan 30 j 12:29	0°00'			-5331 Jun 03 j 07:02	0°00'	
	-5336 Mar 24 j 05:50	0°00'			-5331 Jul 17 j 18:40	0°00'	
desc. node	-5336 Mar 30 j 16:53	2°00'49"		evening set	-5331 Jul 24 j 07:02	4°00'32"	
retrograde	-5336 May 09 j 01:24	11°00'57"		max. Earth dist.	-5331 Aug 08 j 13:39	15°00'21"	2.47379 AU
min. Earth dist.	-5336 Jun 05 j 15:44	7°00'27"	0.38545 AU		-5331 Aug 28 j 18:44	0°00'	
opposition	-5336 Jun 09 j 20:30	6°00'17"	-4°-55'-20"				
greatest brilliancy	-5336 Jun 08 j 19:56	6°00'34"	-2.8m	conjunction	-5331 Sep 15 j 02:26	12°00'49"	0°44'05"
direct	-5336 Jul 09 j 19:39	1°00'10"		minimum elong	-5331 Sep 15 j 04:35	12°00'53"	0°44'17"
	-5336 Sep 27 j 17:39	0°00'			-5331 Oct 07 j 20:15	0°00'	
	-5336 Nov 16 j 19:22	0°00'		morning rise	-5331 Nov 12 j 12:04	27°00'31"	
	-5335 Jan 03 j 13:08	0°00'			-5331 Nov 15 j 16:15	0°00'	
asc. node	-5335 Feb 18 j 07:23	28°00'50"		desc. node	-5331 Nov 20 j 12:40	3°00'46"	
	-5335 Feb 20 j 03:32	0°00'			-5331 Dec 24 j 02:12	0°00'	
	-5335 Apr 08 j 20:06	0°00'			-5330 Jan 31 j 22:45	0°00'	
evening set	-5335 May 04 j 11:00	16°00'11"			-5330 Mar 13 j 03:56	0°00'	
	-5335 May 26 j 03:39	0°00'			-5330 Apr 24 j 18:14	0°00'	
max. Earth dist.	-5335 Jun 07 j 08:57	7°00'50"	2.65317 AU		-5330 Jun 10 j 08:57	0°00'	
					-5330 Aug 06 j 07:02	0°00'	
conjunction	-5335 Jun 20 j 08:12	16°00'13"	0°58'39"	retrograde	-5330 Sep 23 j 06:48	11°00'42"	
minimum elong	-5335 Jun 20 j 06:57	16°00'11"	0°58'52"	asc. node	-5330 Oct 11 j 11:04	9°00'28"	
	-5335 Jul 11 j 10:44	0°00'		min. Earth dist.	-5330 Nov 01 j 00:49	2°00'22"	0.66405 AU
morning rise	-5335 Aug 05 j 01:34	16°00'20"		opposition	-5330 Nov 02 j 07:09	1°00'52"	0°49'33"
	-5335 Aug 25 j 06:57	0°00'		greatest brilliancy	-5330 Nov 02 j 05:18	1°00'54"	-1.3m
	-5335 Oct 07 j 14:28	0°00'			-5330 Nov 07 j 00:00	30°00'00"	
	-5335 Nov 18 j 14:07	0°00'		direct	-5330 Dec 12 j 05:43	22°00'16"	
	-5335 Dec 29 j 16:21	0°00'			-5329 Jan 20 j 10:02	0°00'	
	-5334 Feb 08 j 14:51	0°00'			-5329 Mar 24 j 21:29	0°00'	
desc. node	-5334 Feb 15 j 18:20	5°00'10"			-5329 May 14 j 02:20	0°00'	
	-5334 Mar 22 j 21:24	0°00'			-5329 Jun 28 j 10:16	0°00'	
	-5334 May 09 j 19:30	0°00'			-5329 Aug 09 j 13:03	0°00'	
retrograde	-5334 Jul 08 j 01:42	19°00'14"		evening set	-5329 Sep 15 j 15:17	27°00'52"	
min. Earth dist.	-5334 Aug 06 j 13:12	13°00'18"	0.49392 AU		-5329 Sep 18 j 09:51	0°00'	
greatest brilliancy	-5334 Aug 12 j 12:00	11°00'08"	-2.1m	desc. node	-5329 Oct 08 j 09:54	15°00'29"	
opposition	-5334 Aug 14 j 10:10	10°00'26"	-5°-30'-54"		-5329 Oct 26 j 22:52	0°00'	
direct	-5334 Sep 17 j 03:55	3°00'16"					
	-5334 Dec 06 j 01:57	0°00'		conjunction	-5329 Nov 16 j 19:20	16°00'24"	0°-28'-13"
asc. node	-5333 Jan 06 j 06:48	16°00'56"		minimum elong	-5329 Nov 16 j 16:54	16°00'19"	0°28'15"
	-5333 Jan 29 j 00:29	0°00'		max. Earth dist.	-5329 Nov 26 j 21:22	24°00'20"	2.37718 AU
	-5333 Mar 20 j 06:07	0°00'			-5329 Dec 04 j 02:17	0°00'	
	-5333 May 07 j 14:39	0°00'			-5328 Jan 11 j 17:44	0°00'	
evening set	-5333 Jun 12 j 08:16	22°00'57"		morning rise	-5328 Jan 23 j 09:23	8°00'52"	
	-5333 Jun 23 j 02:01	0°00'			-5328 Feb 20 j 17:07	0°00'	
max. Earth dist.	-5333 Jul 03 j 23:53	7°00'14"	2.58533 AU		-5328 Apr 02 j 17:21	0°00'	
					-5328 May 17 j 09:34	0°00'	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 8

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5328 Jul 04 j 18:54	0°♈				-5323 Aug 19 j 18:46	0°♎	
asc. node	-5328 Aug 28 j 11:53	29°♈05'45				-5323 Sep 29 j 13:48	0°♍	
	-5328 Aug 30 j 11:52	0°♉				-5323 Nov 09 j 08:38	0°♏	
retrograde	-5328 Oct 27 j 09:43	15°♉28'37				-5323 Dec 21 j 05:25	0°♐	
opposition	-5328 Dec 05 j 14:50	6°♉12'30	3°23'17			-5322 Feb 02 j 17:00	0°♑	
greatest brilliancy	-5328 Dec 05 j 22:23	6°♉05'01	-1.3m	evening set		-5322 Mar 10 j 14:45	23°♑56'29	
min. Earth dist.	-5328 Dec 08 j 02:55	5°♉12'57	0.66098 AU			-5322 Mar 19 j 20:28	0°♒	
	-5328 Dec 22 j 13:11	30°♒♈		asc. node		-5322 Apr 20 j 03:21	20°♒17'19	
direct	-5327 Jan 15 j 16:55	26°♈12'50						
	-5327 Feb 10 j 20:33	0°♉		conjunction		-5322 Apr 29 j 08:54	26°♒13'20	0°05'16
	-5327 Apr 18 j 18:56	0°♊		minimum elong		-5322 Apr 29 j 08:41	26°♒12'59	0°05'13
	-5327 Jun 06 j 03:50	0°♋		behind sun begin		-5322 Apr 28 j 13:37	25°♒42'25	
	-5327 Jul 19 j 05:34	0°♌		behind sun end		-5322 Apr 30 j 03:44	26°♒43'32	
desc. node	-5327 Aug 25 j 06:58	27°♌37'27				-5322 May 05 j 06:17	0°♈	
	-5327 Aug 28 j 09:35	0°♍		max. Earth dist.		-5322 May 06 j 01:21	0°♈30'32	2.66022 AU
	-5327 Oct 06 j 00:48	0°♎		morning rise		-5322 Jun 15 j 07:24	26°♈11'49	
	-5327 Nov 13 j 05:52	0°♏				-5322 Jun 21 j 06:42	0°♉	
evening set	-5327 Nov 20 j 13:53	5°♏43'53				-5322 Aug 07 j 07:31	0°♊	
	-5327 Dec 22 j 00:03	0°♏				-5322 Sep 23 j 04:25	0°♋	
						-5322 Nov 09 j 07:10	0°♌	
conjunction	-5326 Jan 23 j 06:56	24°♏14'42	-1°-8'-52			-5322 Dec 28 j 01:02	0°♍	
minimum elong	-5326 Jan 23 j 07:02	24°♏14'53	1°09'11			-5321 Feb 22 j 19:05	0°♎	
	-5326 Jan 31 j 02:55	0°♐		retrograde		-5321 Apr 09 j 12:03	11°♎07'13	
max. Earth dist.	-5326 Mar 07 j 22:58	25°♐39'32	2.49119 AU	desc. node		-5321 Apr 17 j 09:24	10°♎43'16	
	-5326 Mar 14 j 04:13	0°♑		opposition		-5321 May 09 j 22:53	6°♎03'33	-1°-43'-50
morning rise	-5326 Mar 24 j 09:42	7°♑04'15		greatest brilliancy		-5321 May 10 j 00:12	6°♎02'41	-2.9m
	-5326 Apr 27 j 10:48	0°♒		min. Earth dist.		-5321 May 11 j 03:41	5°♎44'22	0.37906 AU
	-5326 Jun 13 j 01:19	0°♈		direct		-5321 Jun 09 j 13:36	0°♎53'17	
asc. node	-5326 Jul 16 j 10:22	20°♈30'07				-5321 Aug 26 j 19:04	0°♏	
	-5326 Aug 01 j 11:05	0°♉				-5321 Oct 13 j 15:49	0°♏	
	-5326 Sep 25 j 17:56	0°♊				-5321 Nov 28 j 06:33	0°♐	
retrograde	-5326 Dec 05 j 19:03	21°♊21'25				-5320 Jan 13 j 01:56	0°♑	
opposition	-5325 Jan 12 j 02:51	13°♊03'47	5°08'37			-5320 Feb 28 j 16:08	0°♒	
greatest brilliancy	-5325 Jan 13 j 12:11	12°♊32'05	-1.6m	asc. node		-5320 Mar 06 j 23:01	4°♒38'58	
min. Earth dist.	-5325 Jan 18 j 08:29	10°♊41'57	0.59490 AU			-5320 Apr 15 j 20:21	0°♈	
direct	-5325 Feb 21 j 17:56	3°♊18'08		evening set		-5320 Apr 19 j 11:08	2°♈17'41	
	-5325 May 09 j 11:55	0°♋		max. Earth dist.		-5320 May 29 j 02:14	27°♈30'55	2.66569 AU
	-5325 Jun 25 j 19:51	0°♌				-5320 Jun 01 j 23:26	0°♉	
desc. node	-5325 Jul 13 j 05:21	12°♌13'32						
	-5325 Aug 06 j 11:45	0°♍		conjunction		-5320 Jun 05 j 15:39	2°♉21'19	0°46'47
	-5325 Sep 14 j 21:07	0°♎		minimum elong		-5320 Jun 05 j 14:21	2°♉19'14	0°46'54
	-5325 Oct 23 j 15:34	0°♏				-5320 Jul 18 j 08:32	0°♊	
	-5325 Dec 01 j 22:25	0°♏		morning rise		-5320 Jul 21 j 03:12	1°♊49'09	
	-5324 Jan 11 j 13:51	0°♐				-5320 Sep 01 j 13:15	0°♋	
evening set	-5324 Jan 22 j 01:18	7°♐31'33				-5320 Oct 15 j 11:45	0°♌	
	-5324 Feb 23 j 01:53	0°♑				-5320 Nov 27 j 09:09	0°♍	
						-5319 Jan 08 j 16:34	0°♎	
conjunction	-5324 Mar 17 j 11:59	15°♑57'29	0°-41'-39			-5319 Feb 20 j 10:02	0°♏	
minimum elong	-5324 Mar 17 j 13:44	16°♑00'25	0°41'51	desc. node		-5319 Mar 04 j 10:24	8°♏11'25	
	-5324 Apr 07 j 13:13	0°♒				-5319 Apr 07 j 11:51	0°♏	
max. Earth dist.	-5324 Apr 10 j 06:50	1°♒48'15	2.60048 AU	retrograde		-5319 Jun 17 j 17:25	26°♏17'30	
morning rise	-5324 May 07 j 23:14	19°♒51'44		min. Earth dist.		-5319 Jul 15 j 04:33	21°♏13'20	0.44417 AU
	-5324 May 23 j 17:54	0°♈		greatest brilliancy		-5319 Jul 21 j 00:07	19°♏17'17	-2.4m
asc. node	-5324 Jun 02 j 07:42	6°♈06'18		opposition		-5319 Jul 23 j 04:04	18°♏33'33	-6°-15'-49
	-5324 Jul 10 j 07:02	0°♉		direct		-5319 Aug 24 j 05:52	12°♏14'29	
	-5324 Aug 28 j 04:58	0°♊				-5319 Oct 24 j 00:33	0°♐	
	-5324 Oct 18 j 23:05	0°♋				-5319 Dec 18 j 11:20	0°♑	
retrograde	-5324 Dec 23 j 00:13	0°♌		asc. node		-5318 Jan 22 j 21:31	20°♑58'55	
	-5323 Jan 25 j 06:21	5°♌51'36				-5318 Feb 06 j 19:58	0°♒	
	-5323 Feb 25 j 18:19	30°♌♈				-5318 Mar 27 j 18:50	0°♈	
opposition	-5323 Feb 28 j 04:23	29°♌11'56	4°49'46			-5318 May 14 j 15:11	0°♉	
greatest brilliancy	-5323 Mar 02 j 05:55	28°♌30'21	-2.2m	evening set		-5318 May 28 j 00:07	8°♉32'41	
min. Earth dist.	-5323 Mar 08 j 16:31	26°♌21'32	0.47583 AU	max. Earth dist.		-5318 Jun 22 j 23:22	25°♉23'17	2.61800 AU
direct	-5323 Apr 06 j 13:06	21°♌03'04				-5318 Jun 29 j 23:43	0°♊	
	-5323 May 15 j 04:59	0°♌						
desc. node	-5323 May 30 j 06:40	7°♌04'04		conjunction		-5318 Jul 14 j 04:05	9°♊25'00	1°10'05
	-5323 Jul 07 j 18:44	0°♍		minimum elong		-5318 Jul 14 j 03:31	9°♊24'01	1°10'23

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5318 Aug 13 j 12:26	0°☾			-5313 Nov 03 j 04:24	30°♊♿	
morning rise	-5318 Aug 30 j 08:46	11°☾41'39		opposition	-5313 Nov 23 j 04:56	23°♿00'43	2°28'14
	-5318 Sep 25 j 04:36	0°♏		greatest brilliancy	-5313 Nov 23 j 06:17	22°♿59'22	-1.3m
	-5318 Nov 05 j 06:44	0°♍		min. Earth dist.	-5313 Nov 24 j 05:34	22°♿36'06	0.66965 AU
	-5318 Dec 15 j 06:29	0°♌		direct	-5312 Jan 03 j 00:23	13°♿06'42	
desc. node	-5317 Jan 20 j 10:35	27°♌24'56			-5312 Mar 04 j 07:30	0°♎	
	-5317 Jan 23 j 20:36	0°♍			-5312 Apr 28 j 19:58	0°♈	
	-5317 Mar 05 j 00:45	0°♐			-5312 Jun 14 j 13:25	0°☾	
	-5317 Apr 16 j 10:45	0°♑			-5312 Jul 27 j 02:56	0°♏	
	-5317 Jun 04 j 10:51	0°♒			-5312 Sep 05 j 02:41	0°♍	
retrograde	-5317 Aug 04 j 04:41	19°♒14'39		desc. node	-5312 Sep 11 j 00:31	4°♍32'53	
min. Earth dist.	-5317 Sep 06 j 00:03	12°♒00'42	0.56686 AU		-5312 Oct 13 j 15:55	0°♌	
greatest brilliancy	-5317 Sep 11 j 06:06	9°♒57'49	-1.7m	evening set	-5312 Oct 24 j 14:40	8°♌36'38	
opposition	-5317 Sep 12 j 07:18	9°♒33'14	-3°-35'-28		-5312 Nov 20 j 19:21	0°♍	
direct	-5317 Oct 18 j 11:49	1°♒19'41					
asc. node	-5317 Dec 10 j 22:24	14°♒53'51		conjunction	-5312 Dec 28 j 17:51	29°♍26'17	-1°-3'-5
	-5316 Jan 11 j 16:29	0°♉		minimum elong	-5312 Dec 28 j 15:31	29°♍21'49	1°03'21
	-5316 Mar 05 j 18:53	0°♊			-5312 Dec 29 j 11:29	0°♐	
	-5316 Apr 24 j 12:03	0°♋			-5311 Feb 07 j 11:47	0°♑	
	-5316 Jun 10 j 10:36	0°♌		max. Earth dist.	-5311 Feb 15 j 04:46	5°♑37'32	2.43975 AU
evening set	-5316 Jul 06 j 17:43	17°♌33'40		morning rise	-5311 Mar 02 j 21:36	16°♑55'30	
max. Earth dist.	-5316 Jul 23 j 05:57	28°♌52'59	2.52175 AU		-5311 Mar 21 j 11:08	0°♒	
	-5316 Jul 24 j 20:36	0°☾			-5311 May 04 j 18:44	0°♉	
					-5311 Jun 20 j 19:20	0°♊	
conjunction	-5316 Aug 26 j 00:41	22°☾46'40	1°00'38	asc. node	-5311 Aug 02 j 02:53	25°♊09'00	
minimum elong	-5316 Aug 26 j 02:22	22°☾49'42	1°00'54		-5311 Aug 10 j 18:28	0°♋	
	-5316 Sep 04 j 23:32	0°♏			-5311 Oct 13 j 16:59	0°♈	
	-5316 Oct 15 j 06:07	0°♍		retrograde	-5311 Nov 19 j 14:08	7°♈00'04	
morning rise	-5316 Oct 18 j 22:11	2°♍47'16			-5311 Dec 23 j 06:30	30°♊♿	
	-5316 Nov 23 j 07:34	0°♌		opposition	-5311 Dec 27 j 19:16	28°♊15'54	4°35'42
desc. node	-5316 Dec 07 j 08:26	10°♌53'47		greatest brilliancy	-5311 Dec 28 j 17:21	27°♊54'28	-1.4m
	-5316 Dec 31 j 22:25	0°♍		min. Earth dist.	-5310 Jan 01 j 14:36	26°♊24'05	0.62818 AU
	-5315 Feb 08 j 23:21	0°♐		direct	-5310 Feb 06 j 20:35	18°♊18'28	
	-5315 Mar 21 j 10:09	0°♑			-5310 Mar 26 j 19:29	0°♈	
	-5315 May 03 j 14:00	0°♒			-5310 May 21 j 12:48	0°☾	
	-5315 Jun 21 j 03:56	0°♉			-5310 Jul 05 j 08:46	0°♏	
retrograde	-5315 Sep 09 j 17:34	28°♉21'01		desc. node	-5310 Jul 29 j 23:00	17°♏50'03	
min. Earth dist.	-5315 Oct 17 j 01:29	19°♉30'25	0.64817 AU		-5310 Aug 15 j 04:54	0°♍	
opposition	-5315 Oct 19 j 18:51	18°♉24'41	0°-19'-9		-5310 Sep 23 j 04:12	0°♌	
greatest brilliancy	-5315 Oct 19 j 17:48	18°♉25'44	-1.4m		-5310 Oct 31 j 15:13	0°♍	
asc. node	-5315 Oct 28 j 00:09	15°♉12'18			-5310 Dec 09 j 15:15	0°♐	
direct	-5315 Nov 27 j 22:21	9°♉04'57		evening set	-5310 Dec 30 j 12:55	15°♐41'31	
	-5314 Feb 06 j 10:49	0°♊			-5309 Jan 19 j 00:00	0°♑	
	-5314 Apr 03 j 04:44	0°♋					
	-5314 May 21 j 22:39	0°♌		conjunction	-5309 Feb 27 j 04:41	27°♑52'13	0°-56'-50
	-5314 Jul 05 j 20:20	0°☾		minimum elong	-5309 Feb 27 j 06:40	27°♑55'41	0°57'08
	-5314 Aug 16 j 21:06	0°♏			-5309 Mar 02 j 06:20	0°♎	
evening set	-5314 Aug 24 j 04:04	5°♏22'42		max. Earth dist.	-5309 Mar 30 j 16:13	19°♎23'07	2.56318 AU
max. Earth dist.	-5314 Sep 18 j 17:05	24°♏35'00	2.40050 AU		-5309 Apr 15 j 14:10	0°♉	
	-5314 Sep 25 j 19:11	0°♍		morning rise	-5309 Apr 22 j 12:15	4°♉33'50	
					-5309 May 31 j 20:18	0°♊	
conjunction	-5314 Oct 21 j 09:34	19°♍48'35	0°02'48	asc. node	-5309 Jun 20 j 00:08	12°♊06'18	
minimum elong	-5314 Oct 21 j 09:47	19°♍48'59	0°02'53		-5309 Jul 18 j 20:51	0°♋	
behind sun begin	-5314 Oct 20 j 07:48	18°♍58'22			-5309 Sep 07 j 06:14	0°♈	
behind sun end	-5314 Oct 22 j 11:45	20°♍39'37			-5309 Nov 03 j 06:59	0°☾	
desc. node	-5314 Oct 25 j 04:10	22°♍45'24		retrograde	-5308 Jan 04 j 00:42	17°☾03'31	
	-5314 Nov 03 j 10:16	0°♌		opposition	-5308 Feb 08 j 12:32	9°☾39'34	5°23'03
	-5314 Dec 11 j 15:28	0°♍		greatest brilliancy	-5308 Feb 10 j 13:01	8°☾56'10	-1.9m
morning rise	-5314 Dec 25 j 23:17	11°♍11'20		min. Earth dist.	-5308 Feb 16 j 14:43	6°☾46'38	0.52671 AU
	-5313 Jan 19 j 07:52	0°♐		direct	-5308 Mar 18 j 15:32	0°☾38'17	
	-5313 Feb 28 j 07:45	0°♑			-5308 Jun 05 j 07:16	0°♏	
	-5313 Apr 11 j 10:20	0°♒		desc. node	-5308 Jun 15 j 22:54	6°♏37'35	
	-5313 May 26 j 12:34	0°♉			-5308 Jul 20 j 09:43	0°♍	
	-5313 Jul 15 j 12:43	0°♊			-5308 Aug 30 j 05:24	0°♌	
asc. node	-5313 Sep 15 j 02:20	27°♊46'43			-5308 Oct 08 j 21:11	0°♍	
	-5313 Sep 23 j 12:52	0°♋			-5308 Nov 17 j 20:54	0°♐	
retrograde	-5313 Oct 14 j 13:12	2°♋32'45			-5308 Dec 29 j 02:32	0°♑	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 10

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5307 Feb 10 j 02:18	0°♊			-5303 Dec 23 j 22:31	0°♊		
evening set	-5307 Feb 21 j 00:40	7°♊25'47			-5302 Feb 02 j 06:43	0°♌		
	-5307 Mar 26 j 21:26	0°♋		desc. node	-5302 Feb 06 j 04:46	2°♌53'51		
					-5302 Mar 15 j 12:27	0°♌		
conjunction	-5307 Apr 13 j 13:26	11°♋32'58	0°-13'-12		-5302 Apr 29 j 07:57	0°♍		
minimum elong	-5307 Apr 13 j 13:59	11°♋33'53	0°13'20		-5302 Jul 05 j 18:22	0°♍		
behind sun begin	-5307 Apr 13 j 02:51	11°♋15'47		retrograde	-5302 Jul 18 j 10:38	1°♍07'11		
behind sun end	-5307 Apr 14 j 01:08	11°♋51'59			-5302 Jul 30 j 19:15	30°♌		
max. Earth dist.	-5307 Apr 26 j 12:27	19°♋56'44	2.64324 AU	min. Earth dist.	-5302 Aug 18 j 02:56	24°♍42'23	0.52094 AU	
asc. node	-5307 May 06 j 20:15	26°♋35'39		greatest brilliancy	-5302 Aug 23 j 22:33	22°♍31'20	-2.0m	
	-5307 May 12 j 03:36	0°♌		opposition	-5302 Aug 25 j 13:45	21°♍54'24	-4°-52'-17	
morning rise	-5307 May 31 j 20:15	12°♌34'57		direct	-5302 Sep 29 j 05:08	14°♍19'32		
	-5307 Jun 28 j 06:41	0°♌			-5302 Nov 25 j 20:57	0°♍		
	-5307 Aug 14 j 20:05	0°♌		asc. node	-5302 Dec 27 j 12:37	15°♍38'17		
	-5307 Oct 01 j 22:51	0°♌			-5301 Jan 22 j 17:17	0°♋		
	-5307 Nov 20 j 21:15	0°♌			-5301 Mar 15 j 00:44	0°♌		
	-5306 Jan 17 j 13:55	0°♌			-5301 May 02 j 19:37	0°♌		
retrograde	-5306 Mar 08 j 20:04	12°♌35'26			-5301 Jun 18 j 10:58	0°♌		
opposition	-5306 Apr 09 j 04:23	7°♌10'11	1°46'49	evening set	-5301 Jun 21 j 08:48	1°♌55'10		
greatest brilliancy	-5306 Apr 09 j 20:25	6°♌58'37	-2.7m	max. Earth dist.	-5301 Jul 10 j 19:54	14°♌55'17	2.56445 AU	
min. Earth dist.	-5306 Apr 15 j 00:34	5°♌29'38	0.40302 AU		-5301 Aug 01 j 21:05	0°♌		
desc. node	-5306 May 04 j 01:08	1°♌27'40						
direct	-5306 May 12 j 06:01	0°♌59'47		conjunction	-5301 Aug 08 j 23:00	4°♌55'28	1°09'22	
	-5306 Jul 27 j 16:27	0°♌		minimum elong	-5301 Aug 08 j 23:45	4°♌56'46	1°09'41	
	-5306 Sep 11 j 14:23	0°♌			-5301 Sep 13 j 04:05	0°♌		
	-5306 Oct 24 j 23:30	0°♌		morning rise	-5301 Sep 28 j 10:40	11°♌10'16		
	-5306 Dec 07 j 12:02	0°♍			-5301 Oct 23 j 16:58	0°♌		
	-5305 Jan 21 j 02:39	0°♍			-5301 Dec 02 j 01:26	0°♌		
	-5305 Mar 07 j 23:38	0°♋		desc. node	-5301 Dec 25 j 02:19	17°♌45'44		
asc. node	-5305 Mar 24 j 15:52	10°♋44'16			-5300 Jan 09 j 23:07	0°♌		
evening set	-5305 Apr 05 j 02:59	18°♋05'09			-5300 Feb 18 j 07:13	0°♌		
	-5305 Apr 23 j 18:41	0°♌			-5300 Mar 30 j 04:32	0°♍		
max. Earth dist.	-5305 May 20 j 20:47	17°♌16'08	2.67015 AU		-5300 May 13 j 10:07	0°♍		
					-5300 Jul 05 j 12:57	0°♋		
conjunction	-5305 May 22 j 23:49	18°♌37'32	0°32'11	retrograde	-5300 Aug 26 j 18:12	14°♋13'43		
minimum elong	-5305 May 22 j 22:45	18°♌35'50	0°32'14	min. Earth dist.	-5300 Oct 01 j 11:17	5°♋56'43	0.62291 AU	
	-5305 Jun 09 j 19:12	0°♌		opposition	-5300 Oct 05 j 15:17	4°♋16'44	-1°-32'-52	
morning rise	-5305 Jul 07 j 16:33	17°♌54'44		greatest brilliancy	-5300 Oct 05 j 07:48	4°♋24'12	-1.5m	
	-5305 Jul 26 j 08:35	0°♌			-5300 Oct 17 j 00:06	30°♌		
	-5305 Sep 10 j 01:24	0°♌		direct	-5300 Nov 12 j 18:55	25°♌18'29		
	-5305 Oct 24 j 21:13	0°♌		asc. node	-5300 Nov 13 j 15:08	25°♌18'45		
	-5305 Dec 08 j 03:49	0°♌			-5300 Dec 12 j 06:23	0°♋		
	-5304 Jan 21 j 14:50	0°♌			-5299 Feb 18 j 05:20	0°♌		
	-5304 Mar 08 j 13:21	0°♌			-5299 Apr 11 j 14:45	0°♌		
desc. node	-5304 Mar 21 j 04:49	7°♌18'37			-5299 May 29 j 10:46	0°♌		
retrograde	-5304 May 24 j 16:27	29°♌12'19			-5299 Jul 13 j 02:24	0°♌		
min. Earth dist.	-5304 Jun 20 j 08:21	24°♌43'43	0.40106 AU	evening set	-5299 Aug 03 j 22:37	15°♌22'52		
greatest brilliancy	-5304 Jun 24 j 23:58	23°♌21'31	-2.7m	max. Earth dist.	-5299 Aug 19 j 23:07	26°♌57'04	2.44683 AU	
opposition	-5304 Jun 26 j 16:27	22°♌51'28	-5°-55'-33		-5299 Aug 24 j 03:10	0°♌		
direct	-5304 Jul 27 j 02:56	17°♌24'48						
	-5304 Sep 13 j 21:43	0°♌		conjunction	-5299 Sep 27 j 11:02	25°♌39'20	0°31'04	
	-5304 Nov 09 j 03:12	0°♍		minimum elong	-5299 Sep 27 j 12:58	25°♌43'01	0°31'13	
	-5304 Dec 28 j 14:35	0°♍			-5299 Oct 03 j 03:50	0°♌		
asc. node	-5303 Feb 08 j 12:22	25°♌58'58		desc. node	-5299 Nov 10 j 23:19	0°♌02'33		
	-5303 Feb 14 j 23:22	0°♋			-5299 Nov 10 j 22:01	0°♌		
	-5303 Apr 04 j 01:12	0°♌		morning rise	-5299 Nov 27 j 14:07	13°♌02'50		
evening set	-5303 May 13 j 00:48	24°♌35'07			-5299 Dec 19 j 05:45	0°♌		
	-5303 May 21 j 12:52	0°♌			-5298 Jan 27 j 00:02	0°♌		
max. Earth dist.	-5303 Jun 12 j 23:29	14°♌25'18	2.64288 AU		-5298 Mar 08 j 01:55	0°♍		
					-5298 Apr 19 j 09:44	0°♍		
conjunction	-5303 Jun 28 j 21:20	24°♌46'28	1°04'01		-5298 Jun 04 j 05:55	0°♋		
minimum elong	-5303 Jun 28 j 20:14	24°♌44'40	1°04'15		-5298 Jul 27 j 09:11	0°♌		
	-5303 Jul 06 j 20:23	0°♌		retrograde	-5298 Oct 01 j 00:23	19°♌38'46		
morning rise	-5303 Aug 13 j 23:00	25°♌29'05		asc. node	-5298 Oct 01 j 17:11	19°♌38'34		
	-5303 Aug 20 j 14:00	0°♌		opposition	-5298 Nov 09 j 23:12	9°♌54'15	1°27'25	
	-5303 Oct 02 j 15:45	0°♌		greatest brilliancy	-5298 Nov 09 j 21:28	9°♌55'59	-1.3m	
	-5303 Nov 13 j 07:09	0°♌		min. Earth dist.	-5298 Nov 09 j 12:34	10°♌04'56	0.66869 AU	

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

direct	-5298 Dec 20 j 06:56	0° Υ 10'23		minimum elong	-5292 Mar 27 j 19:40	25° \approx 58'40	0°31'43
	-5297 Mar 18 j 01:34	0° \mathcal{B}			-5292 Apr 02 j 21:29	0° \mathcal{H}	
	-5297 May 08 j 16:13	0° Π		max. Earth dist.	-5292 Apr 16 j 13:11	8° \mathcal{H} 58'05	2.61809 AU
	-5297 Jun 23 j 10:57	0° \mathfrak{S}		morning rise	-5292 May 16 j 22:00	28° \mathcal{H} 37'04	
	-5297 Aug 04 j 17:36	0° Ω			-5292 May 19 j 01:45	0° Υ	
	-5297 Sep 13 j 15:49	0° \mathfrak{M}		asc. node	-5292 May 23 j 12:29	2° Υ 50'44	
desc. node	-5297 Sep 28 j 19:11	11° \mathfrak{M} 41'51			-5292 Jul 05 j 09:57	0° \mathcal{B}	
evening set	-5297 Sep 29 j 11:33	12° \mathfrak{M} 13'40			-5292 Aug 22 j 17:28	0° Π	
	-5297 Oct 22 j 05:01	0° $\underline{\mathfrak{A}}$			-5292 Oct 11 j 18:36	0° \mathfrak{S}	
	-5297 Nov 29 j 08:14	0° \mathfrak{M}			-5292 Dec 06 j 16:40	0° Ω	
				retrograde	-5291 Feb 08 j 11:38	18° Ω 16'25	
conjunction	-5297 Dec 02 j 08:14	2° \mathfrak{M} 21'07	0°-43'-55	opposition	-5291 Mar 13 j 09:58	12° Ω 03'32	4°05'21
minimum elong	-5297 Dec 02 j 04:56	2° \mathfrak{M} 14'40	0°44'02	greatest brilliancy	-5291 Mar 15 j 04:52	11° Ω 29'06	-2.4m
	-5296 Jan 06 j 23:26	0° \mathcal{A}		min. Earth dist.	-5291 Mar 21 j 12:48	9° Ω 28'04	0.44784 AU
max. Earth dist.	-5296 Jan 11 j 04:26	3° \mathcal{A} 13'04	2.39192 AU	direct	-5291 Apr 18 j 11:11	4° Ω 32'42	
morning rise	-5296 Feb 07 j 10:59	23° \mathcal{A} 44'59		desc. node	-5291 May 20 j 18:29	11° Ω 04'05	
	-5296 Feb 15 j 22:10	0° \mathfrak{Z}			-5291 Jun 27 j 17:50	0° \mathfrak{M}	
	-5296 Mar 28 j 20:40	0° \approx			-5291 Aug 12 j 10:50	0° $\underline{\mathfrak{A}}$	
	-5296 May 12 j 07:42	0° \mathcal{H}			-5291 Sep 23 j 07:39	0° \mathfrak{M}	
	-5296 Jun 29 j 00:53	0° Υ			-5291 Nov 03 j 17:41	0° \mathcal{A}	
asc. node	-5296 Aug 18 j 17:54	28° Υ 28'28			-5291 Dec 16 j 00:44	0° \mathfrak{Z}	
	-5296 Aug 21 j 18:18	0° \mathcal{B}			-5290 Jan 28 j 19:25	0° \approx	
retrograde	-5296 Nov 04 j 14:09	23° \mathcal{B} 26'37			-5290 Mar 15 j 03:31	0° \mathcal{H}	
opposition	-5296 Dec 13 j 12:16	14° \mathcal{B} 20'43	3°52'09	evening set	-5290 Mar 20 j 04:08	3° \mathcal{H} 16'18	
greatest brilliancy	-5296 Dec 14 j 00:27	14° \mathcal{B} 08'42	-1.3m	asc. node	-5290 Apr 10 j 07:38	16° \mathcal{H} 56'54	
min. Earth dist.	-5296 Dec 16 j 20:23	13° \mathcal{B} 01'51	0.65196 AU		-5290 Apr 30 j 15:44	0° Υ	
direct	-5295 Jan 23 j 16:13	4° \mathcal{B} 19'58					
	-5295 Apr 11 j 08:17	0° Π		conjunction	-5290 May 08 j 03:17	4° Υ 47'07	0°15'35
	-5295 May 31 j 10:17	0° \mathfrak{S}		minimum elong	-5290 May 08 j 02:42	4° Υ 46'11	0°15'35
	-5295 Jul 14 j 00:09	0° Ω		behind sun begin	-5290 May 07 j 23:48	4° Υ 41'33	
desc. node	-5295 Aug 15 j 15:55	24° Ω 08'20		behind sun end	-5290 May 08 j 05:36	4° Υ 50'49	
	-5295 Aug 23 j 09:11	0° \mathfrak{M}		max. Earth dist.	-5290 May 11 j 13:30	6° Υ 58'28	2.66609 AU
	-5295 Oct 01 j 02:46	0° $\underline{\mathfrak{A}}$			-5290 Jun 16 j 15:33	0° \mathcal{B}	
	-5295 Nov 08 j 09:21	0° \mathfrak{M}		morning rise	-5290 Jun 23 j 12:10	4° \mathcal{B} 22'43	
evening set	-5295 Dec 05 j 14:30	21° \mathfrak{M} 07'02			-5290 Aug 02 j 11:37	0° Π	
	-5295 Dec 17 j 05:00	0° \mathcal{A}			-5290 Sep 17 j 20:46	0° \mathfrak{S}	
	-5294 Jan 26 j 09:06	0° \mathfrak{Z}			-5290 Nov 02 j 23:12	0° Ω	
					-5290 Dec 19 j 12:50	0° \mathfrak{M}	
conjunction	-5294 Feb 05 j 15:54	7° \mathfrak{Z} 28'06	-1°-6'-53		-5289 Feb 06 j 19:33	0° $\underline{\mathfrak{A}}$	
minimum elong	-5294 Feb 05 j 17:05	7° \mathfrak{Z} 30'14	1°07'11	desc. node	-5289 Apr 07 j 20:09	26° $\underline{\mathfrak{A}}$ 30'34	
	-5294 Mar 09 j 11:11	0° \approx		retrograde	-5289 Apr 27 j 01:22	28° $\underline{\mathfrak{A}}$ 51'03	
max. Earth dist.	-5294 Mar 17 j 01:47	5° \approx 15'57	2.51863 AU	min. Earth dist.	-5289 May 26 j 02:50	24° $\underline{\mathfrak{A}}$ 06'06	0.37865 AU
morning rise	-5294 Apr 04 j 12:28	17° \approx 50'42		opposition	-5289 May 28 j 01:09	23° $\underline{\mathfrak{A}}$ 34'48	-3°-42'-48
	-5294 Apr 22 j 17:00	0° \mathcal{H}		greatest brilliancy	-5289 May 27 j 14:50	23° $\underline{\mathfrak{A}}$ 41'47	-2.9m
	-5294 Jun 08 j 02:49	0° Υ		direct	-5289 Jun 27 j 01:24	18° $\underline{\mathfrak{A}}$ 33'44	
asc. node	-5294 Jul 06 j 16:49	17° Υ 47'26			-5289 Aug 11 j 08:00	0° \mathfrak{M}	
	-5294 Jul 26 j 20:54	0° \mathcal{B}			-5289 Oct 05 j 05:49	0° \mathcal{A}	
	-5294 Sep 17 j 17:35	0° Π			-5289 Nov 21 j 21:12	0° \mathfrak{Z}	
	-5294 Dec 06 j 19:59	0° \mathfrak{S}			-5288 Jan 07 j 15:03	0° \approx	
retrograde	-5294 Dec 15 j 17:23	0° \mathfrak{S} 28'31			-5288 Feb 23 j 17:09	0° \mathcal{H}	
	-5294 Dec 24 j 09:17	30° $\mathfrak{R}\Pi$		asc. node	-5288 Feb 26 j 04:27	1° \mathcal{H} 33'58	
opposition	-5293 Jan 21 j 11:43	22° Π 27'53	5°20'09		-5288 Apr 11 j 03:42	0° Υ	
greatest brilliancy	-5293 Jan 23 j 03:18	21° Π 50'53	-1.7m	evening set	-5288 Apr 28 j 02:52	10° Υ 44'17	
min. Earth dist.	-5293 Jan 28 j 11:40	19° Π 51'33	0.57292 AU		-5288 May 28 j 09:15	0° \mathcal{B}	
direct	-5293 Mar 02 j 17:55	12° Π 53'28		max. Earth dist.	-5288 Jun 03 j 14:12	3° \mathcal{B} 58'29	2.65982 AU
	-5293 Apr 29 j 20:06	0° \mathfrak{S}					
	-5293 Jun 19 j 05:23	0° Ω		conjunction	-5288 Jun 14 j 01:54	10° \mathcal{B} 43'09	0°54'03
desc. node	-5293 Jul 03 j 16:36	9° Ω 52'11		minimum elong	-5288 Jun 14 j 00:36	10° \mathcal{B} 41'03	0°54'13
	-5293 Jul 31 j 17:16	0° \mathfrak{M}			-5288 Jul 13 j 17:43	0° Π	
	-5293 Sep 09 j 11:36	0° $\underline{\mathfrak{A}}$		morning rise	-5288 Jul 29 j 14:57	10° Π 28'30	
	-5293 Oct 18 j 11:28	0° \mathfrak{M}			-5288 Aug 27 j 18:20	0° \mathfrak{S}	
	-5293 Nov 26 j 22:37	0° \mathcal{A}			-5288 Oct 10 j 08:47	0° Ω	
	-5292 Jan 06 j 17:31	0° \mathfrak{Z}			-5288 Nov 21 j 17:57	0° \mathfrak{M}	
evening set	-5292 Feb 02 j 21:13	19° \mathfrak{Z} 16'19			-5287 Jan 02 j 07:46	0° $\underline{\mathfrak{A}}$	
	-5292 Feb 18 j 08:25	0° \approx			-5287 Feb 12 j 21:32	0° \mathfrak{M}	
				desc. node	-5287 Feb 22 j 21:44	7° \mathfrak{M} 06'24	
conjunction	-5292 Mar 27 j 18:18	25° \approx 56'25	0°-31'-32		-5287 Mar 28 j 07:17	0° \mathcal{A}	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 12

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5287 May 19 j 19:35	0°☾				-5282 Aug 12 j 04:03	0°♈		
retrograde	-5287 Jun 29 j 15:16	10°☾11'33		evening set		-5282 Sep 05 j 13:46	18°♈10'54		
min. Earth dist.	-5287 Jul 28 j 04:17	4°☾39'26	0.47135 AU			-5282 Sep 21 j 02:15	0°♍		
greatest brilliancy	-5287 Aug 03 j 03:47	2°☾33'21	-2.2m	desc. node		-5282 Oct 15 j 14:02	18°♍57'48		
opposition	-5287 Aug 05 j 06:06	1°☾48'46	-5°-55'-28	max. Earth dist.		-5282 Oct 16 j 21:02	19°♍58'18	2.38149 AU	
	-5287 Aug 10 j 13:04	30°☾☿				-5282 Oct 29 j 16:26	0°♎		
direct	-5287 Sep 07 j 05:15	25°☿00'44							
	-5287 Oct 06 j 18:27	0°☾		conjunction		-5282 Nov 05 j 01:19	5°♎00'15	0°-14'-57	
	-5287 Dec 11 j 00:01	0°♊		minimum elong		-5282 Nov 05 j 00:01	4°♎57'41	0°14'57	
asc. node	-5286 Jan 13 j 03:30	18°♊48'59		behind sun begin		-5282 Nov 04 j 12:56	4°♎35'55		
	-5286 Feb 01 j 03:28	0°♋		behind sun end		-5282 Nov 05 j 11:05	5°♎19'26		
	-5286 Mar 22 j 18:49	0°♌				-5282 Dec 06 j 20:19	0°♍		
	-5286 May 09 j 22:12	0°♍		morning rise		-5281 Jan 11 j 04:46	27°♍29'05		
evening set	-5286 Jun 05 j 18:11	17°♍10'54				-5281 Jan 14 j 11:27	0°♎		
	-5286 Jun 25 j 09:05	0°♎				-5281 Feb 23 j 09:54	0°☾		
max. Earth dist.	-5286 Jun 29 j 05:41	2°♎32'56	2.60085 AU			-5281 Apr 06 j 09:26	0°♊		
						-5281 May 21 j 03:41	0°♋		
conjunction	-5286 Jul 23 j 06:51	18°♎39'16	1°11'27			-5281 Jul 09 j 00:31	0°♌		
minimum elong	-5286 Jul 23 j 06:42	18°♎39'00	1°11'45	asc. node		-5281 Sep 05 j 08:34	29°♌27'12		
	-5286 Aug 08 j 21:06	0°☾				-5281 Sep 06 j 17:29	0°♍		
morning rise	-5286 Sep 09 j 09:52	22°☾06'30		retrograde		-5281 Oct 22 j 10:26	10°♍23'44		
	-5286 Sep 20 j 10:11	0°♈		opposition		-5281 Nov 30 j 21:28	1°♍00'07	3°00'55	
	-5286 Oct 31 j 07:36	0°♍		greatest brilliancy		-5281 Dec 01 j 01:57	0°♍55'39	-1.3m	
	-5286 Dec 10 j 01:35	0°♎		min. Earth dist.		-5281 Dec 02 j 17:56	0°♍15'54	0.66616 AU	
desc. node	-5285 Jan 10 j 20:42	24°♎16'30				-5281 Dec 03 j 09:58	30°☾☿		
	-5285 Jan 18 j 08:47	0°♏		direct		-5280 Jan 10 j 22:01	21°☿02'21		
	-5285 Feb 27 j 03:42	0°♎				-5280 Feb 22 j 02:10	0°♍		
	-5285 Apr 09 j 19:11	0°☾				-5280 Apr 22 j 13:32	0°♎		
	-5285 May 26 j 04:19	0°♊				-5280 Jun 09 j 05:44	0°☾		
retrograde	-5285 Aug 13 j 01:56	29°♊02'00				-5280 Jul 22 j 03:11	0°♈		
min. Earth dist.	-5285 Sep 15 j 23:17	21°♊24'06	0.58898 AU			-5280 Aug 31 j 06:12	0°♍		
opposition	-5285 Sep 21 j 13:12	19°♊12'02	-2°-50'-12	desc. node		-5280 Sep 01 j 11:14	0°♍55'35		
greatest brilliancy	-5285 Sep 20 j 19:20	19°♊29'40	-1.6m			-5280 Oct 08 j 20:52	0°♎		
direct	-5285 Oct 28 j 12:12	10°♊40'41		evening set		-5280 Nov 08 j 19:12	24°♎19'18		
asc. node	-5285 Dec 01 j 04:56	16°♊43'32				-5280 Nov 16 j 00:50	0°♏		
	-5284 Jan 03 j 01:39	0°♋		greatest brilliancy		-5280 Nov 26 j 16:25	8°♏19'38	1.2m	
	-5284 Feb 28 j 23:07	0°♌				-5280 Dec 24 j 17:19	0°♎		
	-5284 Apr 19 j 11:15	0°♍							
	-5284 Jun 05 j 16:56	0°♎		conjunction		-5279 Jan 12 j 11:29	14°♎13'04	-1°-7'-55	
evening set	-5284 Jul 16 j 14:15	27°♎29'43		minimum elong		-5279 Jan 12 j 10:34	14°♎11'20	1°08'14	
	-5284 Jul 20 j 05:06	0°☾				-5279 Feb 02 j 17:50	0°☾		
max. Earth dist.	-5284 Aug 01 j 00:29	8°☾15'24	2.49559 AU	max. Earth dist.		-5279 Feb 28 j 01:58	18°☾18'11	2.46828 AU	
	-5284 Aug 31 j 07:26	0°♈		morning rise		-5279 Mar 15 j 11:06	29°☾08'27		
						-5279 Mar 16 j 16:41	0°♊		
conjunction	-5284 Sep 06 j 04:14	4°♈18'08	0°52'09			-5279 Apr 29 j 22:06	0°♋		
minimum elong	-5284 Sep 06 j 06:17	4°♈21'55	0°52'23			-5279 Jun 15 j 14:56	0°♌		
	-5284 Oct 10 j 11:58	0°♍		asc. node		-5279 Jul 23 j 07:38	22°☿53'47		
morning rise	-5284 Nov 01 j 11:01	16°♍50'06				-5279 Aug 04 j 12:38	0°♍		
	-5284 Nov 18 j 10:47	0°♎				-5279 Oct 01 j 04:16	0°♎		
desc. node	-5284 Nov 27 j 16:56	7°♎12'23		retrograde		-5279 Nov 28 j 15:37	15°♎31'41		
	-5284 Dec 26 j 22:43	0°♏		opposition		-5278 Jan 05 j 10:14	7°♎01'30	4°55'55	
	-5283 Feb 03 j 20:37	0°♎		greatest brilliancy		-5278 Jan 06 j 14:34	6°♎34'18	-1.5m	
	-5283 Mar 16 j 02:53	0°☾		min. Earth dist.		-5278 Jan 11 j 01:18	4°♎52'07	0.61101 AU	
	-5283 Apr 27 j 20:23	0°♊				-5278 Jan 25 j 13:57	30°☾☿		
	-5283 Jun 14 j 00:33	0°♋		direct		-5278 Feb 15 j 07:42	27°♍09'18		
	-5283 Aug 14 j 06:24	0°♌				-5278 Mar 09 j 05:36	0°♎		
retrograde	-5283 Sep 17 j 13:06	6°☿31'21				-5278 May 14 j 09:05	0°☾		
asc. node	-5283 Oct 18 j 07:12	0°☿18'12				-5278 Jun 29 j 12:35	0°♈		
	-5283 Oct 19 j 02:32	30°☾☿		desc. node		-5278 Jul 20 j 09:17	14°♈52'20		
min. Earth dist.	-5283 Oct 25 j 16:50	27°☿24'21	0.65815 AU			-5278 Aug 09 j 19:54	0°♍		
opposition	-5283 Oct 27 j 14:48	26°☿38'07	0°21'26			-5278 Sep 18 j 00:53	0°♎		
greatest brilliancy	-5283 Oct 27 j 13:42	26°☿39'14	-1.3m			-5278 Oct 26 j 15:30	0°♏		
direct	-5283 Dec 06 j 05:57	17°☿08'34				-5278 Dec 04 j 18:27	0°♎		
	-5282 Jan 27 j 18:14	0°☿		evening set		-5277 Jan 12 j 14:03	28°♎47'59		
	-5282 Mar 28 j 05:47	0°♍				-5277 Jan 14 j 05:42	0°☾		
	-5282 May 16 j 20:08	0°♎				-5277 Feb 25 j 13:44	0°♊		
	-5282 Jul 01 j 01:03	0°☾							

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 13

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

conjunction	-5277 Mar 10 j 10:19	8°≈50'08	0°-48'-31			-5272 Apr 16 j 23:38	0°♂	
minimum elong	-5277 Mar 10 j 12:16	8°≈53'26	0°48'46	retrograde		-5272 Jun 07 j 19:19	15°♂24'18	
max. Earth dist.	-5277 Apr 06 j 15:26	27°≈09'34	2.58469 AU	min. Earth dist.		-5272 Jul 04 j 16:24	10°♂39'19	0.42339 AU
	-5277 Apr 10 j 22:11	0°♂		greatest brilliancy		-5272 Jul 10 j 03:12	8°♂55'59	-2.5m
morning rise	-5277 May 02 j 02:21	13°♂53'29		opposition		-5272 Jul 12 j 04:39	8°♂16'25	-6°-18'-29
	-5277 May 27 j 02:14	0°♀		direct		-5272 Aug 12 j 12:36	2°♂21'34	
asc. node	-5277 Jun 10 j 05:16	8°♀58'51				-5272 Oct 31 j 02:45	0°♂	
	-5277 Jul 13 j 18:59	0°♂				-5272 Dec 22 j 07:28	0°≈	
	-5277 Sep 01 j 05:38	0°♂		asc. node		-5271 Jan 29 j 18:51	23°≈19'10	
	-5277 Oct 24 j 16:14	0°♂				-5271 Feb 09 j 16:29	0°♂	
retrograde	-5276 Jan 16 j 04:53	27°♂48'30				-5271 Mar 30 j 05:25	0°♀	
opposition	-5276 Feb 19 j 20:18	20°♂48'08	5°09'13			-5271 May 16 j 22:03	0°♂	
greatest brilliancy	-5276 Feb 21 j 22:52	20°♂04'17	-2.1m	evening set		-5271 May 21 j 14:06	2°♂58'34	
min. Earth dist.	-5276 Feb 28 j 07:01	17°♂53'13	0.49894 AU	max. Earth dist.		-5271 Jun 18 j 18:10	21°♂08'19	2.63014 AU
direct	-5276 Mar 29 j 02:35	12°♂12'48				-5271 Jul 02 j 06:54	0°♂	
	-5276 May 25 j 15:37	0°♂						
desc. node	-5276 Jun 06 j 10:09	6°♂32'02		conjunction		-5271 Jul 07 j 13:13	3°♂28'30	1°08'03
	-5276 Jul 13 j 03:13	0°♂		minimum elong		-5271 Jul 07 j 12:24	3°♂27'08	1°08'18
	-5276 Aug 24 j 00:06	0°♂				-5271 Aug 15 j 22:35	0°♂	
	-5276 Oct 03 j 05:00	0°♂		morning rise		-5271 Aug 23 j 03:56	4°♂58'09	
	-5276 Nov 12 j 13:39	0°♂				-5271 Sep 27 j 19:42	0°♂	
	-5276 Dec 24 j 02:11	0°♂				-5271 Nov 08 j 03:55	0°♂	
	-5275 Feb 05 j 06:59	0°≈				-5271 Dec 18 j 10:25	0°♂	
evening set	-5275 Mar 03 j 05:49	17°≈27'17		desc. node		-5270 Jan 27 j 14:31	0°♂13'30	
	-5275 Mar 22 j 05:35	0°♂				-5270 Jan 27 j 07:20	0°♂	
						-5270 Mar 08 j 20:07	0°♂	
conjunction	-5275 Apr 22 j 17:22	20°♂28'29	0°-2'-29			-5270 Apr 20 j 23:11	0°♂	
minimum elong	-5275 Apr 22 j 17:29	20°♂28'41	0°02'34			-5270 Jun 12 j 03:39	0°≈	
behind sun begin	-5275 Apr 21 j 21:29	19°♂56'26		retrograde		-5270 Jul 28 j 05:24	12°≈10'13	
behind sun end	-5275 Apr 23 j 13:29	21°♂00'56		min. Earth dist.		-5270 Aug 29 j 02:19	5°≈17'49	0.54718 AU
asc. node	-5275 Apr 27 j 01:05	23°♂15'35		opposition		-5270 Sep 04 j 23:18	2°≈39'23	-4°-8'-55
max. Earth dist.	-5275 May 02 j 03:51	26°♂32'57	2.65361 AU	greatest brilliancy		-5270 Sep 03 j 16:03	3°≈09'27	-1.8m
	-5275 May 07 j 12:54	0°♀				-5270 Sep 12 j 03:41	30°♂♂	
morning rise	-5275 Jun 09 j 04:53	20°♀51'25		direct		-5270 Oct 10 j 12:32	24°♂41'58	
	-5275 Jun 23 j 13:53	0°♂				-5270 Nov 10 j 13:26	0°≈	
	-5275 Aug 09 j 19:49	0°♂		asc. node		-5270 Dec 17 j 19:21	15°≈07'48	
	-5275 Sep 26 j 04:25	0°♂				-5269 Jan 15 j 20:59	0°♂	
	-5275 Nov 13 j 07:43	0°♂				-5269 Mar 09 j 15:31	0°♀	
	-5274 Jan 03 j 15:25	0°♂				-5269 Apr 27 j 23:07	0°♂	
retrograde	-5274 Mar 26 j 11:00	28°♂33'34				-5269 Jun 13 j 19:33	0°♂	
desc. node	-5274 Apr 24 j 13:01	23°♂51'04		evening set		-5269 Jun 30 j 14:17	11°♂08'08	
opposition	-5274 Apr 26 j 01:55	23°♂26'02	0°-6'-58	max. Earth dist.		-5269 Jul 18 j 05:01	23°♂03'54	2.54170 AU
greatest brilliancy	-5274 Apr 26 j 02:26	23°♂25'41	-2.8m			-5269 Jul 28 j 06:46	0°♂	
min. Earth dist.	-5274 Apr 29 j 15:32	22°♂27'48	0.38644 AU					
direct	-5274 May 27 j 14:55	17°♂54'24		conjunction		-5269 Aug 19 j 00:30	15°♂15'20	1°05'14
	-5274 Jul 12 j 11:45	0°♂		minimum elong		-5269 Aug 19 j 01:47	15°♂17'38	1°05'33
	-5274 Sep 02 j 21:58	0°♂				-5269 Sep 08 j 12:36	0°♂	
	-5274 Oct 18 j 06:03	0°♂		morning rise		-5269 Oct 10 j 05:48	23°♂26'46	
	-5274 Dec 01 j 18:22	0°♂				-5269 Oct 18 j 22:39	0°♂	
	-5273 Jan 15 j 22:38	0°≈				-5269 Nov 27 j 03:34	0°♂	
	-5273 Mar 03 j 03:56	0°♂		desc. node		-5269 Dec 15 j 13:12	14°♂14'54	
asc. node	-5273 Mar 14 j 20:41	7°♂30'07				-5268 Jan 04 j 21:05	0°♂	
evening set	-5273 Apr 13 j 23:32	26°♂42'53				-5268 Feb 13 j 00:08	0°♂	
	-5273 Apr 19 j 03:29	0°♀				-5268 Mar 24 j 13:39	0°♂	
max. Earth dist.	-5273 May 26 j 06:17	23°♀38'03	2.66873 AU			-5268 May 07 j 00:23	0°≈	
						-5268 Jun 25 j 20:06	0°♂	
conjunction	-5273 May 31 j 10:03	26°♀55'45	0°40'56	retrograde		-5268 Sep 03 j 20:48	22°♂53'11	
minimum elong	-5273 May 31 j 08:50	26°♀53'47	0°41'02	min. Earth dist.		-5268 Oct 10 j 12:18	14°♂16'55	0.63806 AU
	-5273 Jun 05 j 05:17	0°♂		opposition		-5268 Oct 13 j 21:08	12°♂55'50	0°-49'-27
morning rise	-5273 Jul 15 j 22:36	26°♂15'18		greatest brilliancy		-5268 Oct 13 j 17:53	12°♂59'06	-1.4m
	-5273 Jul 21 j 16:35	0°♂		asc. node		-5268 Nov 03 j 20:54	5°♂48'41	
	-5273 Sep 05 j 02:47	0°♂		direct		-5268 Nov 21 j 14:55	3°♂44'57	
	-5273 Oct 19 j 10:30	0°♂				-5267 Feb 10 j 22:37	0°♀	
	-5273 Dec 01 j 21:16	0°♂				-5267 Apr 06 j 03:14	0°♂	
	-5272 Jan 13 j 23:45	0°♂				-5267 May 24 j 12:40	0°♂	
	-5272 Feb 27 j 00:54	0°♂				-5267 Jul 08 j 09:01	0°♂	
desc. node	-5272 Mar 11 j 14:15	8°♂47'43		evening set		-5267 Aug 15 j 03:29	26°♂50'45	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 14

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5267 Aug 19 j 11:00	0°♈				-5262 Apr 17 j 23:32	0°♋		
max. Earth dist.	-5267 Sep 03 j 14:16	11°♈11'56	2.42031 AU			-5262 Jun 03 j 05:44	0°♊		
	-5267 Sep 28 j 11:03	0°♎		asc. node		-5262 Jun 26 j 21:53	14°♊52'58		
						-5262 Jul 21 j 11:58	0°♉		
conjunction	-5267 Oct 10 j 15:07	9°♎21'11	0°15'43			-5262 Sep 10 j 17:19	0°♈		
minimum elong	-5267 Oct 10 j 16:17	9°♎23'27	0°15'49			-5262 Nov 10 j 21:56	0°♄		
behind sun begin	-5267 Oct 10 j 09:48	9°♎10'57		retrograde		-5262 Dec 26 j 09:44	10°♄08'18		
behind sun end	-5267 Oct 10 j 22:46	9°♎35'58		opposition		-5261 Jan 31 j 12:00	2°♄27'08	5°24'38	
desc. node	-5267 Nov 01 j 09:05	26°♎15'22		greatest brilliancy		-5261 Feb 02 j 09:08	1°♄45'53	-1.8m	
	-5267 Nov 06 j 04:01	0°♊				-5261 Feb 07 j 05:16	30°♋♈		
morning rise	-5267 Dec 13 j 09:34	29°♊11'45		min. Earth dist.		-5261 Feb 08 j 04:02	29°♈39'35	0.54818 AU	
	-5267 Dec 14 j 10:13	0°♌		direct		-5261 Mar 12 j 05:24	23°♈08'47		
	-5266 Jan 22 j 02:44	0°♌				-5261 Apr 15 j 11:09	0°♄		
	-5266 Mar 03 j 02:19	0°♈				-5261 Jun 11 j 17:48	0°♈		
	-5266 Apr 14 j 05:05	0°♌		desc. node		-5261 Jun 24 j 02:52	8°♈04'36		
	-5266 May 29 j 11:48	0°♋				-5261 Jul 25 j 12:42	0°♎		
	-5266 Jul 19 j 09:37	0°♊				-5261 Sep 03 j 20:18	0°♊		
asc. node	-5266 Sep 21 j 22:51	25°♊50'14				-5261 Oct 13 j 04:07	0°♌		
retrograde	-5266 Oct 08 j 18:27	27°♊31'19				-5261 Nov 21 j 20:59	0°♌		
opposition	-5266 Nov 17 j 14:19	17°♊53'17	2°03'30			-5260 Jan 01 j 20:31	0°♈		
greatest brilliancy	-5266 Nov 17 j 13:53	17°♊53'44	-1.3m	evening set		-5260 Feb 13 j 23:54	0°♌15'38		
min. Earth dist.	-5266 Nov 17 j 23:19	17°♊44'17	0.67049 AU			-5260 Feb 13 j 14:47	0°♌		
direct	-5266 Dec 28 j 05:40	8°♊03'11				-5260 Mar 29 j 06:01	0°♋		
	-5265 Mar 10 j 08:08	0°♉							
	-5265 May 03 j 00:43	0°♈		conjunction		-5260 Apr 06 j 12:09	5°♋25'45	0°-21'00	
	-5265 Jun 18 j 09:22	0°♄		minimum elong		-5260 Apr 06 j 13:04	5°♋27'14	0°21'09	
	-5265 Jul 30 j 21:05	0°♈		max. Earth dist.		-5260 Apr 22 j 13:04	15°♋53'11	2.63296 AU	
	-5265 Sep 08 j 20:55	0°♎		asc. node		-5260 May 13 j 17:50	29°♋33'37		
desc. node	-5265 Sep 19 j 04:56	7°♎57'44				-5260 May 14 j 10:17	0°♊		
evening set	-5265 Oct 13 j 23:52	27°♎17'49		morning rise		-5260 May 25 j 13:30	7°♊07'19		
	-5265 Oct 17 j 10:30	0°♊				-5260 Jun 30 j 14:57	0°♉		
	-5265 Nov 24 j 13:35	0°♌				-5260 Aug 17 j 11:17	0°♈		
						-5260 Oct 05 j 07:03	0°♄		
conjunction	-5265 Dec 17 j 22:07	18°♌13'41	0°-56'-22			-5260 Nov 26 j 02:57	0°♈		
minimum elong	-5265 Dec 17 j 19:00	18°♌07'39	0°56'33			-5259 Feb 05 j 21:22	0°♎		
	-5264 Jan 02 j 04:35	0°♌		retrograde		-5259 Feb 23 j 22:36	1°♎54'42		
max. Earth dist.	-5264 Feb 03 j 11:33	24°♌21'13	2.41698 AU			-5259 Mar 13 j 13:48	30°♋♈		
	-5264 Feb 11 j 03:11	0°♈		opposition		-5259 Mar 27 j 23:35	26°♈09'12	2°56'51	
morning rise	-5264 Feb 21 j 16:13	7°♈41'56		greatest brilliancy		-5259 Mar 29 j 05:13	25°♈46'43	-2.6m	
	-5264 Mar 24 j 00:38	0°♌		min. Earth dist.		-5259 Apr 04 j 03:26	23°♈59'47	0.42133 AU	
	-5264 May 07 j 07:57	0°♋		direct		-5259 May 01 j 09:39	19°♈22'34		
	-5264 Jun 23 j 12:49	0°♊		desc. node		-5259 May 11 j 04:25	20°♈01'51		
asc. node	-5264 Aug 08 j 23:57	27°♊05'45				-5259 Jun 12 j 14:52	0°♎		
	-5264 Aug 14 j 08:22	0°♉				-5259 Aug 03 j 18:38	0°♊		
	-5264 Oct 27 j 11:57	0°♈				-5259 Sep 16 j 10:30	0°♌		
retrograde	-5264 Nov 13 j 01:05	1°♈35'22				-5259 Oct 28 j 18:38	0°♌		
	-5264 Nov 28 j 17:45	30°♋♈				-5259 Dec 10 j 15:50	0°♈		
opposition	-5264 Dec 21 j 14:55	22°♋40'57	4°18'16			-5258 Jan 23 j 19:50	0°♌		
greatest brilliancy	-5264 Dec 22 j 08:26	22°♋23'51	-1.4m			-5258 Mar 10 j 10:00	0°♋		
min. Earth dist.	-5264 Dec 25 j 18:53	21°♋03'22	0.64008 AU	evening set		-5258 Mar 29 j 09:42	12°♋16'29		
direct	-5263 Jan 31 j 19:03	12°♋41'07		asc. node		-5258 Mar 31 j 13:22	13°♋39'35		
	-5263 Apr 02 j 11:04	0°♈				-5258 Apr 26 j 01:14	0°♊		
	-5263 May 25 j 07:37	0°♄							
	-5263 Jul 08 j 14:56	0°♈		conjunction		-5258 May 16 j 16:50	13°♊10'52	0°25'25	
desc. node	-5263 Aug 06 j 02:58	20°♈50'20		minimum elong		-5258 May 16 j 15:57	13°♊09'26	0°25'28	
	-5263 Aug 18 j 06:45	0°♎		max. Earth dist.		-5258 May 16 j 23:29	13°♊21'28	2.66942 AU	
	-5263 Sep 26 j 03:45	0°♊				-5258 Jun 12 j 01:16	0°♉		
	-5263 Nov 03 j 12:22	0°♌		morning rise		-5258 Jul 01 j 15:28	12°♉32'40		
	-5263 Dec 12 j 09:30	0°♌				-5258 Jul 28 j 17:45	0°♈		
evening set	-5263 Dec 19 j 23:24	5°♌44'42				-5258 Sep 12 j 17:38	0°♄		
	-5262 Jan 21 j 15:00	0°♈				-5258 Oct 28 j 02:09	0°♈		
						-5258 Dec 12 j 05:22	0°♎		
conjunction	-5262 Feb 18 j 04:28	19°♈47'40	-1°-1'-56			-5257 Jan 27 j 05:43	0°♊		
minimum elong	-5262 Feb 18 j 06:16	19°♈50'51	1°02'14			-5257 Mar 19 j 11:32	0°♌		
	-5262 Mar 04 j 17:57	0°♌		desc. node		-5257 Mar 29 j 07:55	4°♌45'42		
max. Earth dist.	-5262 Mar 25 j 04:40	14°♌02'42	2.54404 AU	retrograde		-5257 May 13 j 18:46	16°♌35'34		
morning rise	-5262 Apr 15 j 00:13	28°♌01'41		min. Earth dist.		-5257 Jun 10 j 00:23	12°♌08'14	0.38756 AU	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 15

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

opposition	-5257 Jun 14 j 17:05	10° \mathbb{M} 49'12	-5°-13'-14	conjunction	-5252 Sep 17 j 22:17	16° \mathbb{Q} 28'42	0°41'06
greatest brilliancy	-5257 Jun 13 j 12:56	11° \mathbb{M} 09'00	-2.8m	minimum elong	-5252 Sep 18 j 00:26	16° \mathbb{Q} 32'43	0°41'19
direct	-5257 Jul 14 j 16:07	5° \mathbb{M} 39'46			-5252 Oct 05 j 19:30	0° \mathbb{M}	
	-5257 Sep 24 j 16:05	0° \mathbb{J}			-5252 Nov 13 j 16:06	0° \mathbb{L}	
	-5257 Nov 14 j 20:12	0° \mathbb{Z}		morning rise	-5252 Nov 15 j 19:59	1° \mathbb{L} 41'08	
	-5256 Jan 01 j 21:54	0° \approx		desc. node	-5252 Nov 18 j 03:30	3° \mathbb{L} 29'24	
asc. node	-5256 Feb 16 j 09:38	28° \approx 35'15			-5252 Dec 22 j 01:32	0° \mathbb{M}	
	-5256 Feb 18 j 15:37	0° \mathbb{H}		greatest brilliancy	-5251 Jan 14 j 06:36	18° \mathbb{M} 01'51	1.2m
	-5256 Apr 06 j 10:07	0° \mathbb{Y}			-5251 Jan 29 j 20:34	0° \mathbb{J}	
evening set	-5256 May 06 j 16:58	19° \mathbb{Y} 07'18			-5251 Mar 10 j 23:02	0° \mathbb{Z}	
	-5256 May 23 j 19:12	0° \mathbb{B}			-5251 Apr 22 j 08:41	0° \approx	
max. Earth dist.	-5256 Jun 09 j 02:39	10° \mathbb{B} 27'41	2.65149 AU		-5251 Jun 07 j 13:46	0° \mathbb{H}	
					-5251 Aug 01 j 18:26	0° \mathbb{Y}	
conjunction	-5256 Jun 22 j 12:57	19° \mathbb{B} 08'56	1°00'15	retrograde	-5251 Sep 25 j 07:31	14° \mathbb{Y} 33'15	
minimum elong	-5256 Jun 22 j 11:45	19° \mathbb{B} 06'58	1°00'27	asc. node	-5251 Oct 08 j 13:28	13° \mathbb{Y} 22'50	
	-5256 Jul 09 j 03:42	0° \mathbb{I}		min. Earth dist.	-5251 Nov 03 j 06:20	5° \mathbb{Y} 10'42	0.66518 AU
morning rise	-5256 Aug 07 j 07:06	19° \mathbb{I} 21'18		opposition	-5251 Nov 04 j 08:25	4° \mathbb{Y} 44'29	1°00'31
	-5256 Aug 23 j 00:59	0° \mathbb{S}		greatest brilliancy	-5251 Nov 04 j 06:24	4° \mathbb{Y} 46'30	-1.3m
	-5256 Oct 05 j 09:00	0° \mathbb{Q}			-5251 Nov 16 j 19:09	30° \mathbb{R} \mathbb{H}	
	-5256 Nov 16 j 08:18	0° \mathbb{M}		direct	-5251 Dec 14 j 09:31	25° \mathbb{H} 06'25	
	-5256 Dec 27 j 09:08	0° \mathbb{L}			-5250 Jan 13 j 17:22	0° \mathbb{Y}	
	-5255 Feb 06 j 04:20	0° \mathbb{M}			-5250 Mar 21 j 19:25	0° \mathbb{B}	
desc. node	-5255 Feb 13 j 08:36	5° \mathbb{M} 14'02			-5250 May 11 j 13:14	0° \mathbb{I}	
	-5255 Mar 20 j 02:53	0° \mathbb{J}			-5250 Jun 26 j 03:12	0° \mathbb{S}	
	-5255 May 05 j 20:16	0° \mathbb{Z}			-5250 Aug 07 j 09:40	0° \mathbb{Q}	
retrograde	-5255 Jul 10 j 15:16	22° \mathbb{Z} 52'57			-5250 Sep 16 j 08:45	0° \mathbb{M}	
min. Earth dist.	-5255 Aug 09 j 07:58	16° \mathbb{Z} 52'15	0.49884 AU	evening set	-5250 Sep 18 j 18:54	1° \mathbb{M} 51'38	
greatest brilliancy	-5255 Aug 15 j 07:30	14° \mathbb{Z} 41'02	-2.1m	desc. node	-5250 Oct 05 j 23:34	15° \mathbb{M} 09'44	
opposition	-5255 Aug 17 j 04:25	13° \mathbb{Z} 59'46	-5°-22'-21		-5250 Oct 24 j 22:51	0° \mathbb{L}	
direct	-5255 Sep 20 j 02:10	6° \mathbb{Z} 45'01					
	-5255 Dec 02 j 06:42	0° \approx		conjunction	-5250 Nov 20 j 07:04	20° \mathbb{L} 43'33	0°-32'-6
asc. node	-5254 Jan 03 j 09:09	17° \approx 04'08		minimum elong	-5250 Nov 20 j 04:21	20° \mathbb{L} 38'13	0°32'10
	-5254 Jan 26 j 03:30	0° \mathbb{H}			-5250 Dec 02 j 02:16	0° \mathbb{M}	
	-5254 Mar 17 j 16:10	0° \mathbb{Y}		max. Earth dist.	-5250 Dec 08 j 01:17	4° \mathbb{M} 40'22	2.37863 AU
	-5254 May 05 j 04:35	0° \mathbb{B}			-5249 Jan 09 j 16:40	0° \mathbb{J}	
evening set	-5254 Jun 14 j 15:06	25° \mathbb{B} 57'28		morning rise	-5249 Jan 26 j 20:47	13° \mathbb{J} 03'54	
	-5254 Jun 20 j 18:56	0° \mathbb{I}			-5249 Feb 18 j 14:06	0° \mathbb{Z}	
max. Earth dist.	-5254 Jul 05 j 17:56	9° \mathbb{I} 55'36	2.58163 AU		-5249 Apr 01 j 11:25	0° \approx	
					-5249 May 15 j 23:20	0° \mathbb{H}	
conjunction	-5254 Aug 01 j 15:48	28° \mathbb{I} 11'19	1°10'59		-5249 Jul 03 j 00:22	0° \mathbb{Y}	
minimum elong	-5254 Aug 01 j 16:08	28° \mathbb{I} 11'55	1°11'17	asc. node	-5249 Aug 26 j 14:35	29° \mathbb{Y} 36'49	
	-5254 Aug 04 j 06:50	0° \mathbb{S}			-5249 Aug 27 j 10:13	0° \mathbb{B}	
	-5254 Sep 15 j 17:31	0° \mathbb{Q}		retrograde	-5249 Oct 30 j 11:26	18° \mathbb{B} 17'46	
morning rise	-5254 Sep 19 j 23:04	3° \mathbb{Q} 03'54		opposition	-5249 Dec 08 j 16:16	9° \mathbb{B} 03'35	3°31'25
	-5254 Oct 26 j 10:41	0° \mathbb{M}		greatest brilliancy	-5249 Dec 09 j 00:48	8° \mathbb{B} 55'09	-1.3m
	-5254 Dec 04 j 23:36	0° \mathbb{L}		min. Earth dist.	-5249 Dec 11 j 08:55	7° \mathbb{B} 59'41	0.65950 AU
desc. node	-5253 Jan 01 j 06:31	20° \mathbb{L} 57'19			-5248 Jan 06 j 17:42	30° \mathbb{R} \mathbb{Y}	
	-5253 Jan 13 j 01:12	0° \mathbb{M}		direct	-5248 Jan 18 j 19:54	29° \mathbb{Y} 03'26	
	-5253 Feb 21 j 12:53	0° \mathbb{J}			-5248 Jan 31 j 09:27	0° \mathbb{B}	
	-5253 Apr 03 j 15:42	0° \mathbb{Z}			-5248 Apr 15 j 16:14	0° \mathbb{I}	
	-5253 May 18 j 12:02	0° \approx			-5248 Jun 03 j 16:06	0° \mathbb{S}	
	-5253 Jul 14 j 11:30	0° \mathbb{H}			-5248 Jul 16 j 23:51	0° \mathbb{Q}	
retrograde	-5253 Aug 21 j 15:08	8° \mathbb{H} 19'14		desc. node	-5248 Aug 22 j 19:57	27° \mathbb{Q} 21'57	
min. Earth dist.	-5253 Sep 25 j 13:27	0° \mathbb{H} 18'53	0.60877 AU		-5248 Aug 26 j 06:53	0° \mathbb{M}	
	-5253 Sep 26 j 08:32	30° \mathbb{R} \approx			-5248 Oct 03 j 23:30	0° \mathbb{L}	
opposition	-5253 Sep 30 j 08:32	28° \approx 24'25	-2°-5'-6		-5248 Nov 11 j 04:47	0° \mathbb{M}	
greatest brilliancy	-5253 Sep 29 j 21:05	28° \approx 35'49	-1.6m	evening set	-5248 Nov 24 j 02:08	10° \mathbb{M} 03'51	
direct	-5253 Nov 07 j 00:11	19° \approx 37'22			-5248 Dec 19 j 22:18	0° \mathbb{J}	
asc. node	-5253 Nov 21 j 11:18	20° \approx 52'02					
	-5253 Dec 23 j 00:01	0° \mathbb{H}		conjunction	-5247 Jan 26 j 12:11	28° \mathbb{J} 10'43	-1°-8'-38
	-5252 Feb 22 j 17:58	0° \mathbb{Y}		minimum elong	-5247 Jan 26 j 12:37	28° \mathbb{J} 11'31	1°08'57
	-5252 Apr 14 j 07:23	0° \mathbb{B}			-5247 Jan 28 j 23:46	0° \mathbb{Z}	
	-5252 May 31 j 22:18	0° \mathbb{I}		max. Earth dist.	-5247 Mar 10 j 06:41	28° \mathbb{Z} 49'35	2.49672 AU
	-5252 Jul 15 j 13:39	0° \mathbb{S}			-5247 Mar 11 j 23:03	0° \approx	
evening set	-5252 Jul 26 j 20:10	7° \mathbb{S} 52'03		morning rise	-5247 Mar 27 j 03:52	10° \approx 29'56	
max. Earth dist.	-5252 Aug 10 j 23:53	18° \mathbb{S} 38'09	2.46891 AU		-5247 Apr 25 j 03:08	0° \mathbb{H}	
	-5252 Aug 26 j 16:23	0° \mathbb{Q}			-5247 Jun 10 j 14:11	0° \mathbb{Y}	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 16

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

asc. node	-5247 Jul 13 j 14:11	20°Υ22'20		-5242 Aug 22 j 17:08	0°ℳ	
	-5247 Jul 29 j 17:16	0°Ϡ		-5242 Oct 10 j 17:18	0°Ϡ	
	-5247 Sep 22 j 01:32	0°Π		-5242 Nov 25 j 16:20	0°Ϡ	
retrograde	-5247 Dec 08 j 03:44	24°Π20'40		-5241 Jan 10 j 14:49	0°≈	
opposition	-5246 Jan 14 j 09:50	16°Π06'02	5°11'28	-5241 Feb 26 j 06:16	0°Ϡ	
greatest brilliancy	-5246 Jan 15 j 20:35	15°Π33'09	-1.6m	asc. node	-5241 Mar 05 j 01:56	4°Ϡ20'55
min. Earth dist.	-5246 Jan 20 j 20:08	13°Π40'25	0.59111 AU		-5241 Apr 14 j 11:14	0°Υ
direct	-5246 Feb 24 j 00:43	6°Π21'55		evening set	-5241 Apr 22 j 17:14	5°Υ13'54
	-5246 May 06 j 02:00	0°Ϡ			-5241 May 31 j 15:13	0°Ϡ
	-5246 Jun 23 j 07:05	0°Ω		max. Earth dist.	-5241 May 31 j 17:24	0°Ϡ03'30 2.66491 AU
desc. node	-5246 Jul 10 j 20:07	12°Ω13'37				
	-5246 Aug 04 j 05:41	0°Ϡ		conjunction	-5241 Jun 08 j 20:01	5°Ϡ15'15 0°48'53
	-5246 Sep 12 j 17:44	0°Ω		minimum elong	-5241 Jun 08 j 18:43	5°Ϡ13'10 0°49'02
	-5246 Oct 21 j 12:53	0°ℳ			-5241 Jul 17 j 01:20	0°Π
	-5246 Nov 29 j 19:16	0°Ϡ		morning rise	-5241 Jul 24 j 07:15	4°Π44'55
	-5245 Jan 09 j 09:31	0°Ϡ			-5241 Aug 31 j 06:43	0°Ϡ
evening set	-5245 Jan 24 j 23:43	11°Ϡ11'09			-5241 Oct 14 j 05:03	0°Ω
	-5245 Feb 20 j 20:03	0°≈			-5241 Nov 26 j 00:59	0°Ϡ
					-5240 Jan 07 j 05:03	0°Ω
conjunction	-5245 Mar 21 j 02:48	19°≈15'07	0°-38'-58		-5240 Feb 18 j 15:06	0°ℳ
minimum elong	-5245 Mar 21 j 04:27	19°≈17'54	0°39'11	desc. node	-5240 Mar 02 j 01:20	8°ℳ34'17
	-5245 Apr 06 j 05:51	0°Ϡ			-5240 Apr 03 j 19:01	0°Ϡ
max. Earth dist.	-5245 Apr 13 j 03:49	4°Ϡ33'43	2.60431 AU		-5240 Jun 13 j 18:04	0°Ϡ
morning rise	-5245 May 11 j 07:17	22°Ϡ53'11		retrograde	-5240 Jun 20 j 14:03	0°Ϡ20'19
	-5245 May 22 j 08:58	0°Υ			-5240 Jun 27 j 08:47	30°ϠϠ
asc. node	-5245 May 31 j 10:21	5°Υ47'03		min. Earth dist.	-5240 Jul 18 j 07:03	25°Ϡ11'05 0.44908 AU
	-5245 Jul 08 j 19:58	0°Ϡ		greatest brilliancy	-5240 Jul 24 j 03:35	23°Ϡ12'37 -2.4m
	-5245 Aug 26 j 13:20	0°Π		opposition	-5240 Jul 26 j 07:45	22°Ϡ28'13 -6°-13'-4
	-5245 Oct 16 j 18:17	0°Ϡ		direct	-5240 Aug 27 j 12:26	16°Ϡ03'43
	-5245 Dec 17 j 01:22	0°Ω			-5240 Oct 19 j 04:22	0°Ϡ
retrograde	-5244 Jan 29 j 10:44	9°Ω24'41			-5240 Dec 15 j 09:58	0°≈
opposition	-5244 Mar 03 j 03:28	2°Ω49'43	4°39'54	asc. node	-5239 Jan 20 j 00:45	20°≈54'17
greatest brilliancy	-5244 Mar 05 j 03:46	2°Ω09'22	-2.2m		-5239 Feb 04 j 04:15	0°Ϡ
	-5244 Mar 11 j 15:54	30°ϠϠ			-5239 Mar 25 j 07:09	0°Υ
min. Earth dist.	-5244 Mar 11 j 13:44	0°Ω01'44	0.47062 AU		-5239 May 12 j 06:03	0°Ϡ
direct	-5244 Apr 09 j 06:37	24°Ϡ46'59		evening set	-5239 May 30 j 06:08	11°Ϡ29'56
	-5244 May 08 j 01:19	0°Ω		max. Earth dist.	-5239 Jun 24 j 19:29	28°Ϡ06'09 2.61492 AU
desc. node	-5244 May 27 j 22:09	8°Ω17'33			-5239 Jun 27 j 16:45	0°Π
	-5244 Jul 04 j 15:52	0°Ϡ				
	-5244 Aug 17 j 05:49	0°Ω		conjunction	-5239 Jul 16 j 11:08	12°Π27'53 1°10'37
	-5244 Sep 27 j 05:43	0°ℳ		minimum elong	-5239 Jul 16 j 10:40	12°Π27'06 1°10'53
	-5244 Nov 07 j 02:11	0°Ϡ			-5239 Aug 11 j 07:19	0°Ϡ
	-5244 Dec 18 j 23:05	0°Ϡ		morning rise	-5239 Sep 01 j 19:35	14°Ϡ56'36
	-5243 Jan 31 j 09:59	0°≈			-5239 Sep 23 j 00:53	0°Ω
evening set	-5243 Mar 13 j 02:04	27°≈05'28			-5239 Nov 03 j 03:41	0°Ϡ
	-5243 Mar 17 j 12:38	0°Ϡ			-5239 Dec 13 j 03:17	0°Ω
asc. node	-5243 Apr 17 j 05:07	19°Ϡ54'50		desc. node	-5238 Jan 18 j 01:12	27°Ω15'19
					-5238 Jan 21 j 16:06	0°ℳ
conjunction	-5243 May 01 j 15:46	29°Ϡ11'47	0°08'11		-5238 Mar 02 j 17:02	0°Ϡ
minimum elong	-5243 May 01 j 15:27	29°Ϡ11'16	0°08'09		-5238 Apr 13 j 19:25	0°Ϡ
behind sun begin	-5243 Apr 30 j 22:09	28°Ϡ43'33			-5238 May 31 j 17:07	0°≈
behind sun end	-5243 May 02 j 08:45	29°Ϡ38'59		retrograde	-5238 Aug 06 j 11:34	22°≈26'33
	-5243 May 02 j 21:52	0°Υ		min. Earth dist.	-5238 Sep 08 j 11:39	15°≈08'16 0.57110 AU
max. Earth dist.	-5243 May 07 j 17:14	3°Υ04'45	2.66159 AU	opposition	-5238 Sep 14 j 15:57	12°≈43'32 -3°-23'-47
morning rise	-5243 Jun 17 j 10:55	29°Υ04'13		greatest brilliancy	-5238 Sep 13 j 16:34	13°≈06'23 -1.7m
	-5243 Jun 18 j 21:56	0°Ϡ		direct	-5238 Oct 21 j 00:52	4°≈26'19
	-5243 Aug 04 j 22:06	0°Π		asc. node	-5238 Dec 08 j 01:36	15°≈46'06
	-5243 Sep 20 j 16:50	0°Ϡ			-5237 Jan 08 j 03:36	0°Ϡ
	-5243 Nov 06 j 14:01	0°Ω			-5237 Mar 04 j 00:39	0°Υ
	-5243 Dec 24 j 17:32	0°Ϡ			-5237 Apr 23 j 00:31	0°Ϡ
	-5242 Feb 16 j 18:36	0°Ω			-5237 Jun 09 j 03:04	0°Π
retrograde	-5242 Apr 13 j 09:07	15°Ω43'53		evening set	-5237 Jul 10 j 04:04	20°Π44'00
desc. node	-5242 Apr 14 j 23:45	15°Ω42'52			-5237 Jul 23 j 15:52	0°Ϡ
opposition	-5242 May 13 j 22:27	10°Ω39'14	-2°-12'-35	max. Earth dist.	-5237 Jul 26 j 06:56	1°Ϡ49'24 2.51671 AU
greatest brilliancy	-5242 May 13 j 22:29	10°Ω39'13	-2.9m			
min. Earth dist.	-5242 May 14 j 12:25	10°Ω29'53	0.37817 AU	conjunction	-5237 Aug 29 j 16:30	26°Ϡ14'18 0°58'41
direct	-5242 Jun 13 j 10:09	5°Ω32'03		minimum elong	-5237 Aug 29 j 18:17	26°Ϡ17'31 0°58'57

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 17

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5237 Sep 03 j 20:47	0°♈		asc. node	-5232 Jul 30 j 04:58	25°♑08'37	
	-5237 Oct 14 j 04:29	0°♐			-5232 Aug 07 j 18:06	0°♏	
morning rise	-5237 Oct 23 j 00:19	6°♐42'49			-5232 Oct 07 j 21:58	0°♐	
	-5237 Nov 22 j 06:19	0°♑		retrograde	-5232 Nov 21 j 19:35	9°♐54'46	
desc. node	-5237 Dec 05 j 21:44	10°♑35'34		opposition	-5232 Dec 29 j 23:43	1°♐13'15	4°41'04
	-5237 Dec 30 j 20:42	0°♒		greatest brilliancy	-5232 Dec 30 j 23:11	0°♐50'33	-1.4m
	-5236 Feb 07 j 20:11	0°♑			-5231 Jan 02 j 03:23	30°♒♏	
	-5236 Mar 19 j 04:07	0°♑		min. Earth dist.	-5231 Jan 03 j 23:45	29°♏17'16	0.62526 AU
	-5236 May 01 j 02:13	0°♒		direct	-5231 Feb 09 j 01:31	21°♏16'31	
	-5236 Jun 18 j 00:34	0°♑			-5231 Mar 21 j 13:55	0°♐	
	-5236 Aug 28 j 20:51	0°♑			-5231 May 18 j 16:25	0°♑	
retrograde	-5236 Sep 11 j 18:54	1°♑12'51			-5231 Jul 02 j 23:53	0°♈	
	-5236 Sep 25 j 03:26	30°♒♑		desc. node	-5231 Jul 27 j 13:31	17°♈42'52	
min. Earth dist.	-5236 Oct 19 j 07:11	22°♑18'53	0.65030 AU		-5231 Aug 13 j 00:51	0°♐	
opposition	-5236 Oct 21 j 20:27	21°♑17'19	0°-7'-41		-5231 Sep 21 j 02:21	0°♑	
greatest brilliancy	-5236 Oct 21 j 20:01	21°♑17'45	-1.4m		-5231 Oct 29 j 14:00	0°♒	
asc. node	-5236 Oct 25 j 03:50	19°♑58'02			-5231 Dec 07 j 13:28	0°♑	
direct	-5236 Nov 30 j 02:40	11°♑55'28		evening set	-5230 Jan 02 j 15:07	19°♑32'41	
	-5235 Feb 02 j 13:00	0°♑			-5230 Jan 16 j 20:49	0°♑	
	-5235 Mar 31 j 10:12	0°♏			-5230 Feb 28 j 01:11	0°♒	
	-5235 May 19 j 12:41	0°♐					
	-5235 Jul 03 j 15:04	0°♑		conjunction	-5230 Mar 01 j 23:11	1°♒19'46	0°-54'-48
	-5235 Aug 14 j 18:49	0°♈		minimum elong	-5230 Mar 02 j 01:11	1°♒23'14	0°55'03
evening set	-5235 Aug 26 j 23:41	9°♈00'42		max. Earth dist.	-5230 Apr 01 j 14:26	22°♒12'28	2.56730 AU
max. Earth dist.	-5235 Sep 23 j 07:32	29°♈38'55	2.39610 AU		-5230 Apr 13 j 06:48	0°♑	
	-5235 Sep 23 j 18:33	0°♐		morning rise	-5230 Apr 24 j 23:15	7°♑42'24	
desc. node	-5235 Oct 22 j 18:23	22°♐26'35			-5230 May 29 j 10:28	0°♑	
				asc. node	-5230 Jun 17 j 02:47	11°♑50'02	
conjunction	-5235 Oct 24 j 16:19	23°♐56'17	0°-1'-25		-5230 Jul 16 j 07:30	0°♏	
minimum elong	-5235 Oct 24 j 16:13	23°♐56'06	0°01'23		-5230 Sep 04 j 08:54	0°♐	
behind sun begin	-5235 Oct 23 j 13:53	23°♐04'40			-5230 Oct 30 j 01:52	0°♑	
behind sun end	-5235 Oct 25 j 18:33	24°♐47'33		retrograde	-5229 Jan 06 j 20:15	20°♑20'02	
	-5235 Nov 01 j 10:10	0°♑		opposition	-5229 Feb 11 j 03:47	13°♑00'31	5°19'46
	-5235 Dec 09 j 14:54	0°♒		greatest brilliancy	-5229 Feb 13 j 05:00	12°♑16'40	-1.9m
morning rise	-5235 Dec 29 j 16:24	15°♒40'04		min. Earth dist.	-5229 Feb 19 j 08:01	10°♑06'25	0.52159 AU
	-5234 Jan 17 j 05:57	0°♑		direct	-5229 Mar 22 j 03:52	4°♑03'11	
	-5234 Feb 26 j 03:41	0°♑			-5229 Jun 02 j 21:17	0°♈	
	-5234 Apr 09 j 03:02	0°♒		desc. node	-5229 Jun 14 j 13:45	7°♈05'15	
	-5234 May 23 j 23:56	0°♑			-5229 Jul 18 j 19:35	0°♐	
	-5234 Jul 12 j 11:19	0°♑			-5229 Aug 28 j 21:32	0°♑	
asc. node	-5234 Sep 12 j 05:37	29°♑02'30			-5229 Oct 07 j 15:43	0°♒	
	-5234 Sep 15 j 05:21	0°♏			-5229 Nov 16 j 15:58	0°♑	
retrograde	-5234 Oct 16 j 13:50	5°♏20'42			-5229 Dec 27 j 21:09	0°♑	
	-5234 Nov 14 j 08:39	30°♒♑			-5228 Feb 08 j 19:53	0°♒	
opposition	-5234 Nov 25 j 05:39	25°♑50'21	2°37'30	evening set	-5228 Feb 24 j 14:16	10°♒42'09	
greatest brilliancy	-5234 Nov 25 j 07:36	25°♑48'24	-1.3m		-5228 Mar 24 j 13:52	0°♑	
min. Earth dist.	-5234 Nov 26 j 10:38	25°♑21'27	0.66941 AU				
direct	-5233 Jan 05 j 03:00	15°♑55'23		conjunction	-5228 Apr 15 j 22:03	14°♑36'01	0°-10'-15
	-5233 Mar 01 j 01:13	0°♏		minimum elong	-5228 Apr 15 j 22:30	14°♑36'44	0°10'22
	-5233 Apr 27 j 01:36	0°♐		behind sun begin	-5228 Apr 15 j 06:47	14°♑11'15	
	-5233 Jun 13 j 04:51	0°♑		behind sun end	-5228 Apr 16 j 14:12	15°♑02'13	
	-5233 Jul 25 j 23:18	0°♈		max. Earth dist.	-5228 Apr 28 j 07:17	22°♑36'42	2.64536 AU
	-5233 Sep 04 j 01:43	0°♐		asc. node	-5228 May 03 j 22:46	26°♑14'51	
desc. node	-5233 Sep 09 j 15:38	4°♐17'07			-5228 May 09 j 18:55	0°♑	
	-5233 Oct 12 j 16:07	0°♑		morning rise	-5228 Jun 03 j 01:01	15°♑29'59	
evening set	-5233 Oct 28 j 23:28	12°♑49'34			-5228 Jun 25 j 20:53	0°♏	
	-5233 Nov 19 j 19:28	0°♒			-5228 Aug 12 j 08:19	0°♐	
	-5233 Dec 28 j 10:28	0°♑			-5228 Sep 29 j 06:30	0°♑	
					-5228 Nov 17 j 16:43	0°♈	
conjunction	-5232 Jan 02 j 03:52	3°♑36'49	-1°-4'-35		-5227 Jan 12 j 03:15	0°♐	
minimum elong	-5232 Jan 02 j 01:50	3°♑32'55	1°04'50	retrograde	-5227 Mar 12 j 16:05	16°♐47'44	
	-5232 Feb 06 j 08:50	0°♑		opposition	-5227 Apr 12 j 20:00	11°♐26'33	1°21'57
max. Earth dist.	-5232 Feb 19 j 17:26	9°♑44'23	2.44499 AU	greatest brilliancy	-5227 Apr 13 j 07:58	11°♐18'02	-2.7m
morning rise	-5232 Mar 05 j 23:41	20°♑40'35		min. Earth dist.	-5227 Apr 18 j 08:55	9°♐52'30	0.39950 AU
	-5232 Mar 19 j 05:37	0°♒		desc. node	-5227 May 01 j 16:20	6°♐41'39	
	-5232 May 02 j 10:01	0°♑		direct	-5227 May 15 j 14:32	5°♐24'00	
	-5232 Jun 18 j 05:51	0°♑			-5227 Jul 23 j 17:38	0°♑	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 18

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5227 Sep 08 j 17:15	0°♌		conjunction	-5222 Aug 11 j 08:44	8°♏06'55	1°08'30
	-5227 Oct 22 j 10:18	0°♍		minimum elong	-5222 Aug 11 j 09:38	8°♏08'28	1°08'48
	-5227 Dec 05 j 01:48	0°♎			-5222 Sep 11 j 01:47	0°♏	
	-5226 Jan 18 j 17:23	0°♏		morning rise	-5222 Oct 01 j 03:25	14°♏41'36	
	-5226 Mar 05 j 14:35	0°♐			-5222 Oct 21 j 15:46	0°♐	
asc. node	-5226 Mar 21 j 18:06	10°♐23'49			-5222 Nov 30 j 00:22	0°♑	
evening set	-5226 Apr 07 j 09:56	21°♐04'01		desc. node	-5222 Dec 22 j 17:22	17°♑31'18	
	-5226 Apr 21 j 09:49	0°♑			-5221 Jan 07 j 21:08	0°♌	
max. Earth dist.	-5226 May 22 j 08:45	19°♑43'50	2.67007 AU		-5221 Feb 16 j 02:59	0°♍	
					-5221 Mar 28 j 20:02	0°♎	
conjunction	-5226 May 25 j 04:29	21°♑31'53	0°34'42		-5221 May 11 j 16:26	0°♏	
minimum elong	-5226 May 25 j 03:22	21°♑30'06	0°34'46		-5221 Jul 02 j 07:52	0°♐	
	-5226 Jun 07 j 10:43	0°♑		retrograde	-5221 Aug 29 j 22:20	17°♐14'30	
morning rise	-5226 Jul 09 j 20:19	20°♑49'04		min. Earth dist.	-5221 Oct 04 j 20:08	8°♐53'17	0.62615 AU
	-5226 Jul 24 j 00:23	0°♒		opposition	-5221 Oct 08 j 20:02	7°♐17'21	-1°-20'-40
	-5226 Sep 07 j 16:47	0°♓		greatest brilliancy	-5221 Oct 08 j 13:47	7°♐23'37	-1.5m
	-5226 Oct 22 j 10:52	0°♑			-5221 Oct 30 j 21:28	30°♒	
	-5226 Dec 05 j 13:37	0°♒		asc. node	-5221 Nov 11 j 17:13	28°♒23'39	
	-5225 Jan 18 j 16:46	0°♓		direct	-5221 Nov 16 j 02:43	28°♒16'12	
	-5225 Mar 05 j 17:55	0°♌			-5221 Dec 03 j 08:31	0°♐	
desc. node	-5225 Mar 19 j 17:47	8°♌23'19			-5220 Feb 15 j 23:50	0°♑	
	-5225 May 05 j 07:47	0°♍			-5220 Apr 08 j 23:40	0°♑	
retrograde	-5225 May 29 j 01:30	3°♍40'57			-5220 May 27 j 01:55	0°♒	
	-5225 Jun 21 j 18:25	30°♒			-5220 Jul 10 j 21:25	0°♓	
min. Earth dist.	-5225 Jun 24 j 17:53	29°♒09'01	0.40505 AU	evening set	-5220 Aug 06 j 13:41	18°♓47'35	
greatest brilliancy	-5225 Jun 29 j 12:49	27°♒43'08	-2.7m		-5220 Aug 22 j 00:53	0°♑	
opposition	-5225 Jul 01 j 07:21	27°♒11'00	-6°-4'-29	max. Earth dist.	-5220 Aug 23 j 03:01	0°♑47'48	2.44182 AU
direct	-5225 Jul 31 j 23:02	21°♒39'02					
	-5225 Sep 08 j 12:42	0°♍		conjunction	-5220 Sep 30 j 10:23	29°♑27'50	0°27'32
	-5225 Nov 06 j 21:01	0°♎		minimum elong	-5220 Sep 30 j 12:11	29°♑31'15	0°27'41
	-5225 Dec 26 j 21:27	0°♏			-5220 Oct 01 j 03:16	0°♐	
asc. node	-5224 Feb 06 j 15:59	25°♏47'24		desc. node	-5220 Nov 08 j 13:26	29°♐42'52	
	-5224 Feb 13 j 10:52	0°♐			-5220 Nov 08 j 22:12	0°♑	
	-5224 Apr 01 j 15:03	0°♑		morning rise	-5220 Dec 01 j 02:12	17°♑21'12	
evening set	-5224 May 15 j 05:47	27°♑29'10			-5220 Dec 17 j 05:45	0°♌	
	-5224 May 19 j 04:33	0°♑			-5219 Jan 24 j 22:47	0°♍	
max. Earth dist.	-5224 Jun 14 j 18:16	17°♑04'12	2.64066 AU		-5219 Mar 05 j 22:14	0°♎	
					-5219 Apr 17 j 01:57	0°♏	
conjunction	-5224 Jul 01 j 02:03	27°♑42'34	1°05'14		-5219 Jun 01 j 14:21	0°♐	
minimum elong	-5224 Jul 01 j 01:01	27°♑40'54	1°05'29		-5219 Jul 23 j 17:18	0°♑	
	-5224 Jul 04 j 13:46	0°♒		asc. node	-5219 Sep 28 j 19:08	22°♑21'27	
morning rise	-5224 Aug 16 j 05:45	28°♒33'02		retrograde	-5219 Oct 03 j 01:31	22°♑28'22	
	-5224 Aug 18 j 08:45	0°♓		opposition	-5219 Nov 12 j 00:09	12°♑45'11	1°37'52
	-5224 Sep 30 j 11:10	0°♑		greatest brilliancy	-5219 Nov 11 j 22:33	12°♑46'47	-1.3m
	-5224 Nov 11 j 02:20	0°♒		min. Earth dist.	-5219 Nov 11 j 17:46	12°♑51'35	0.66936 AU
	-5224 Dec 21 j 16:25	0°♓		direct	-5219 Dec 22 j 09:42	2°♑59'46	
	-5223 Jan 30 j 21:55	0°♌			-5218 Mar 14 j 17:45	0°♑	
desc. node	-5223 Feb 03 j 18:00	2°♌50'54			-5218 May 06 j 02:14	0°♒	
	-5223 Mar 12 j 21:57	0°♍			-5218 Jun 21 j 04:02	0°♓	
	-5223 Apr 26 j 01:53	0°♎			-5218 Aug 02 j 14:35	0°♑	
	-5223 Jun 24 j 04:10	0°♏			-5218 Sep 11 j 14:57	0°♐	
retrograde	-5223 Jul 20 j 22:37	4°♏37'33		desc. node	-5218 Sep 26 j 09:05	11°♐23'03	
	-5223 Aug 15 j 13:48	30°♒		evening set	-5218 Oct 02 j 17:55	16°♐20'05	
min. Earth dist.	-5223 Aug 20 j 20:10	28°♒07'47	0.52624 AU		-5218 Oct 20 j 05:00	0°♑	
greatest brilliancy	-5223 Aug 26 j 15:53	25°♒56'17	-1.9m		-5218 Nov 27 j 08:03	0°♌	
opposition	-5223 Aug 28 j 05:16	25°♒20'57	-4°-41'-42				
direct	-5223 Oct 02 j 02:16	17°♒41'21		conjunction	-5218 Dec 05 j 21:09	6°♌41'53	0°-47'-9
	-5223 Nov 21 j 00:18	0°♒		minimum elong	-5218 Dec 05 j 17:48	6°♌35'20	0°47'18
asc. node	-5223 Dec 24 j 16:00	15°♒57'39			-5217 Jan 04 j 22:12	0°♍	
	-5222 Jan 19 j 16:44	0°♐		max. Earth dist.	-5217 Jan 16 j 17:50	9°♍01'14	2.39621 AU
	-5222 Mar 12 j 09:57	0°♑		morning rise	-5217 Feb 10 j 19:45	27°♍48'24	
	-5222 Apr 30 j 09:28	0°♑			-5217 Feb 13 j 19:07	0°♎	
	-5222 Jun 16 j 04:05	0°♒			-5217 Mar 27 j 15:04	0°♓	
evening set	-5222 Jun 23 j 15:42	4°♒56'11			-5217 May 10 j 22:22	0°♐	
max. Earth dist.	-5222 Jul 12 j 16:54	17°♒41'35	2.56046 AU		-5217 Jun 27 j 08:52	0°♑	
	-5222 Jul 30 j 16:49	0°♓		asc. node	-5217 Aug 16 j 20:49	28°♑45'11	
					-5217 Aug 19 j 06:28	0°♑	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 19

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

retrograde	-5217 Nov 07 j 17:34	26°♄18'15			-5211 Mar 12 j 19:23	0°♄	
opposition	-5217 Dec 16 j 14:55	17°♄14'39	3°59'23	evening set	-5211 Mar 22 j 12:56	6°♄19'44	
greatest brilliancy	-5217 Dec 17 j 04:15	17°♄01'33	-1.3m	asc. node	-5211 Apr 07 j 10:59	16°♄37'07	
min. Earth dist.	-5217 Dec 20 j 03:30	15°♄51'36	0.65003 AU		-5211 Apr 28 j 07:14	0°♄	
direct	-5216 Jan 26 j 19:56	7°♄13'48					
	-5216 Apr 07 j 20:20	0°♄		conjunction	-5211 May 10 j 08:06	7°♄41'50	0°18'21
	-5216 May 28 j 20:34	0°♄		minimum elong	-5211 May 10 j 07:25	7°♄40'44	0°18'21
	-5216 Jul 11 j 18:09	0°♄		max. Earth dist.	-5211 May 13 j 03:59	9°♄30'12	2.66696 AU
desc. node	-5216 Aug 13 j 06:59	23°♄56'51			-5211 Jun 14 j 06:56	0°♄	
	-5216 Aug 21 j 06:52	0°♄		morning rise	-5211 Jun 25 j 14:26	7°♄13'28	
	-5216 Sep 29 j 02:01	0°♄			-5211 Jul 31 j 02:47	0°♄	
	-5216 Nov 06 j 08:46	0°♄			-5211 Sep 15 j 10:46	0°♄	
evening set	-5216 Dec 08 j 22:38	25°♄15'22			-5211 Oct 31 j 09:47	0°♄	
	-5216 Dec 15 j 03:29	0°♄			-5211 Dec 16 j 15:12	0°♄	
	-5215 Jan 24 j 05:54	0°♄			-5210 Feb 02 j 22:30	0°♄	
				desc. node	-5210 Apr 05 j 11:08	29°♄31'28	
conjunction	-5215 Feb 08 j 16:37	11°♄12'21	-1°-5'-49		-5210 Apr 07 j 02:39	0°♄	
minimum elong	-5215 Feb 08 j 18:02	11°♄14'53	1°06'08	retrograde	-5210 Apr 30 j 22:12	3°♄32'03	
	-5215 Mar 07 j 05:52	0°♄			-5210 May 25 j 06:41	30°♄	
max. Earth dist.	-5215 Mar 19 j 04:03	8°♄15'04	2.52359 AU	min. Earth dist.	-5210 May 29 j 11:22	28°♄53'24	0.37933 AU
morning rise	-5215 Apr 07 j 03:57	21°♄09'57		greatest brilliancy	-5210 May 31 j 10:38	28°♄21'29	-2.9m
	-5215 Apr 20 j 09:17	0°♄		opposition	-5210 Jun 01 j 00:29	28°♄12'07	-4°-7'-1
	-5215 Jun 05 j 16:06	0°♄		direct	-5210 Jun 30 j 21:06	23°♄11'25	
asc. node	-5215 Jul 03 j 19:23	17°♄34'59			-5210 Aug 03 j 22:19	0°♄	
	-5215 Jul 24 j 04:54	0°♄			-5210 Oct 01 j 18:51	0°♄	
	-5215 Sep 14 j 10:38	0°♄			-5210 Nov 19 j 01:54	0°♄	
	-5215 Nov 22 j 15:46	0°♄			-5209 Jan 05 j 01:22	0°♄	
retrograde	-5215 Dec 18 j 07:13	3°♄36'19			-5209 Feb 21 j 05:57	0°♄	
	-5214 Jan 11 j 04:54	30°♄		asc. node	-5209 Feb 23 j 07:18	1°♄18'06	
opposition	-5214 Jan 23 j 22:34	25°♄39'28	5°21'14		-5209 Apr 09 j 18:00	0°♄	
greatest brilliancy	-5214 Jan 25 j 15:27	25°♄01'27	-1.7m	evening set	-5209 May 01 j 08:19	13°♄39'31	
min. Earth dist.	-5214 Jan 31 j 02:09	23°♄00'21	0.56839 AU		-5209 May 27 j 00:51	0°♄	
direct	-5214 Mar 05 j 03:14	16°♄07'37		max. Earth dist.	-5209 Jun 06 j 04:46	6°♄30'28	2.65860 AU
	-5214 Apr 25 j 09:56	0°♄					
	-5214 Jun 16 j 10:46	0°♄		conjunction	-5209 Jun 17 j 05:50	13°♄37'04	0°55'51
desc. node	-5214 Jul 01 j 06:49	9°♄59'49		minimum elong	-5209 Jun 17 j 04:32	13°♄34'59	0°56'02
	-5214 Jul 29 j 08:33	0°♄			-5209 Jul 12 j 10:32	0°♄	
	-5214 Sep 07 j 06:55	0°♄		morning rise	-5209 Aug 01 j 19:08	13°♄25'55	
	-5214 Oct 16 j 08:19	0°♄			-5209 Aug 26 j 12:05	0°♄	
	-5214 Nov 24 j 19:28	0°♄			-5209 Oct 09 j 02:48	0°♄	
	-5213 Jan 04 j 13:23	0°♄			-5209 Nov 20 j 11:18	0°♄	
evening set	-5213 Feb 05 j 14:33	22°♄43'07			-5209 Dec 31 j 23:09	0°♄	
	-5213 Feb 16 j 02:48	0°♄			-5208 Feb 11 j 08:31	0°♄	
				desc. node	-5208 Feb 21 j 12:38	7°♄16'30	
conjunction	-5213 Mar 31 j 05:16	29°♄05'26	0°-28'-43		-5208 Mar 25 j 06:52	0°♄	
minimum elong	-5213 Mar 31 j 06:31	29°♄07'30	0°28'54		-5208 May 14 j 10:51	0°♄	
	-5213 Apr 01 j 14:15	0°♄		retrograde	-5208 Jul 02 j 07:51	13°♄58'47	
max. Earth dist.	-5213 Apr 19 j 08:53	11°♄40'22	2.62115 AU	min. Earth dist.	-5208 Jul 31 j 01:30	8°♄22'13	0.47629 AU
	-5213 May 17 j 17:03	0°♄		greatest brilliancy	-5208 Aug 06 j 02:14	6°♄14'08	-2.2m
morning rise	-5213 May 20 j 03:51	1°♄34'13		opposition	-5208 Aug 08 j 03:45	5°♄30'03	-5°-48'-51
asc. node	-5213 May 21 j 15:18	2°♄30'59			-5208 Aug 27 j 01:01	30°♄	
	-5213 Jul 03 j 23:33	0°♄		direct	-5208 Sep 10 j 07:05	28°♄37'08	
	-5213 Aug 21 j 03:42	0°♄			-5208 Sep 25 j 06:28	0°♄	
	-5213 Oct 09 j 20:00	0°♄			-5208 Dec 07 j 14:06	0°♄	
	-5213 Dec 03 j 08:04	0°♄		asc. node	-5207 Jan 10 j 06:09	18°♄50'12	
retrograde	-5212 Feb 12 j 21:06	22°♄05'50			-5207 Jan 29 j 09:00	0°♄	
opposition	-5212 Mar 16 j 15:59	15°♄58'12	3°50'24		-5207 Mar 20 j 06:02	0°♄	
greatest brilliancy	-5212 Mar 18 j 08:06	15°♄26'17	-2.4m		-5207 May 07 j 12:48	0°♄	
min. Earth dist.	-5212 Mar 24 j 15:18	13°♄27'14	0.44240 AU	evening set	-5207 Jun 08 j 00:11	20°♄08'32	
direct	-5212 Apr 21 j 08:17	8°♄35'47			-5207 Jun 23 j 02:21	0°♄	
desc. node	-5212 May 18 j 07:44	13°♄14'28		max. Earth dist.	-5207 Jul 01 j 01:17	5°♄15'12	2.59749 AU
	-5212 Jun 23 j 16:05	0°♄					
	-5212 Aug 09 j 13:38	0°♄		conjunction	-5207 Jul 25 j 14:12	21°♄43'32	1°11'30
	-5212 Sep 20 j 19:00	0°♄		minimum elong	-5207 Jul 25 j 14:11	21°♄43'30	1°11'47
	-5212 Nov 01 j 08:34	0°♄			-5207 Aug 06 j 16:32	0°♄	
	-5212 Dec 13 j 16:52	0°♄		morning rise	-5207 Sep 11 j 21:45	25°♄25'03	
	-5211 Jan 26 j 11:41	0°♄			-5207 Sep 18 j 07:04	0°♄	

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5207 Oct 29 j 05:10	0°♎		greatest brilliancy	-5202 Dec 03 j 03:51	3°♌44'30	-1.3m
	-5207 Dec 07 j 23:00	0°♊		min. Earth dist.	-5202 Dec 04 j 23:40	3°♌01'01	0.66514 AU
desc. node	-5206 Jan 08 j 11:00	24°♊04'24			-5202 Dec 12 j 19:29	30°♎♎	
	-5206 Jan 16 j 05:07	0°♎		direct	-5201 Jan 12 j 23:56	23°♎51'12	
	-5206 Feb 24 j 21:29	0°♎			-5201 Feb 16 j 02:26	0°♎	
	-5206 Apr 07 j 07:22	0°♎			-5201 Apr 20 j 14:51	0°♎	
	-5206 May 23 j 00:47	0°♎			-5201 Jun 07 j 19:22	0°♎	
	-5206 Jul 28 j 03:04	0°♎			-5201 Jul 20 j 22:14	0°♎	
retrograde	-5206 Aug 15 j 07:43	2°♎07'59			-5201 Aug 30 j 04:08	0°♎	
	-5206 Sep 01 j 15:43	30°♎♎		desc. node	-5201 Aug 31 j 00:25	0°♎38'46	
min. Earth dist.	-5206 Sep 18 j 09:52	24°♎25'26	0.59284 AU		-5201 Oct 07 j 20:08	0°♎	
opposition	-5206 Sep 23 j 19:43	22°♎17'10	-2°-38'-12	greatest brilliancy	-5201 Nov 13 j 08:49	28°♎42'28	1.2m
greatest brilliancy	-5206 Sep 23 j 03:33	22°♎33'09	-1.6m	evening set	-5201 Nov 13 j 07:29	28°♎39'51	
direct	-5206 Oct 30 j 22:08	13°♎42'31			-5201 Nov 15 j 00:22	0°♎	
asc. node	-5206 Nov 28 j 07:48	18°♎08'51			-5201 Dec 23 j 16:12	0°♎	
	-5206 Dec 29 j 21:12	0°♎					
	-5205 Feb 26 j 01:45	0°♎		conjunction	-5200 Jan 16 j 19:18	18°♎15'54	-1°-8'-25
	-5205 Apr 17 j 22:40	0°♎		minimum elong	-5200 Jan 16 j 18:42	18°♎14'47	1°08'42
	-5205 Jun 04 j 09:13	0°♎			-5200 Feb 01 j 15:16	0°♎	
	-5205 Jul 19 j 00:51	0°♎		max. Earth dist.	-5200 Mar 02 j 12:44	21°♎34'38	2.47391 AU
evening set	-5205 Jul 20 j 01:33	0°♎42'45			-5200 Mar 14 j 12:02	0°♎	
max. Earth dist.	-5205 Aug 04 j 06:32	11°♎21'19	2.49076 AU	morning rise	-5200 Mar 18 j 08:06	2°♎40'23	
	-5205 Aug 30 j 05:36	0°♎			-5200 Apr 27 j 14:41	0°♎	
					-5200 Jun 13 j 03:34	0°♎	
conjunction	-5205 Sep 09 j 21:12	7°♎48'57	0°49'39	asc. node	-5200 Jul 20 j 11:25	22°♎48'41	
minimum elong	-5205 Sep 09 j 23:18	7°♎52'48	0°49'53		-5200 Aug 01 j 17:11	0°♎	
	-5205 Oct 09 j 11:34	0°♎			-5200 Sep 27 j 00:49	0°♎	
morning rise	-5205 Nov 05 j 14:53	20°♎49'25		retrograde	-5200 Nov 30 j 23:00	18°♎27'27	
	-5205 Nov 17 j 10:47	0°♎		opposition	-5199 Jan 07 j 15:36	10°♎00'11	4°59'54
desc. node	-5205 Nov 26 j 08:04	6°♎55'12		greatest brilliancy	-5199 Jan 08 j 21:24	9°♎31'41	-1.5m
	-5205 Dec 25 j 22:09	0°♎		min. Earth dist.	-5199 Jan 13 j 11:13	7°♎46'51	0.60754 AU
	-5204 Feb 02 j 18:29	0°♎		direct	-5199 Feb 17 j 12:40	0°♎08'55	
	-5204 Mar 13 j 21:56	0°♎			-5199 May 11 j 06:35	0°♎	
	-5204 Apr 25 j 10:27	0°♎			-5199 Jun 27 j 01:50	0°♎	
	-5204 Jun 11 j 03:14	0°♎		desc. node	-5199 Jul 17 j 23:51	14°♎48'34	
	-5204 Aug 08 j 13:06	0°♎			-5199 Aug 07 j 14:49	0°♎	
retrograde	-5204 Sep 19 j 14:52	9°♎22'17			-5199 Sep 15 j 22:05	0°♎	
asc. node	-5204 Oct 15 j 10:18	4°♎54'41			-5199 Oct 24 j 13:15	0°♎	
min. Earth dist.	-5204 Oct 27 j 22:58	0°♎11'40	0.65968 AU		-5199 Dec 02 j 15:40	0°♎	
	-5204 Oct 28 j 10:35	30°♎♎			-5198 Jan 12 j 01:39	0°♎	
opposition	-5204 Oct 29 j 16:22	29°♎30'03	0°32'37	evening set	-5198 Jan 15 j 15:12	2°♎35'08	
greatest brilliancy	-5204 Oct 29 j 14:49	29°♎31'36	-1.3m		-5198 Feb 23 j 08:05	0°♎	
direct	-5204 Dec 08 j 09:14	19°♎58'36					
	-5203 Jan 22 j 18:56	0°♎		conjunction	-5198 Mar 13 j 02:56	12°♎12'39	0°-46'-3
	-5203 Mar 25 j 07:20	0°♎		minimum elong	-5198 Mar 13 j 04:49	12°♎15'51	0°46'17
	-5203 May 14 j 08:30	0°♎		max. Earth dist.	-5198 Apr 08 j 10:03	29°♎52'05	2.58884 AU
	-5203 Jun 28 j 18:55	0°♎			-5198 Apr 08 j 14:49	0°♎	
	-5203 Aug 10 j 01:25	0°♎		morning rise	-5198 May 04 j 11:19	16°♎57'28	
evening set	-5203 Sep 08 j 13:38	21°♎59'42			-5198 May 24 j 17:01	0°♎	
	-5203 Sep 19 j 01:48	0°♎		asc. node	-5198 Jun 07 j 08:12	8°♎41'06	
desc. node	-5203 Oct 13 j 04:16	18°♎38'08			-5198 Jul 11 j 07:06	0°♎	
max. Earth dist.	-5203 Oct 25 j 16:13	28°♎24'20	2.37953 AU		-5198 Aug 29 j 12:00	0°♎	
	-5203 Oct 27 j 17:01	0°♎			-5198 Oct 21 j 04:23	0°♎	
					-5197 Jan 04 j 15:53	0°♎	
conjunction	-5203 Nov 08 j 10:20	9°♎12'35	0°-19'-3	retrograde	-5197 Jan 19 j 04:55	1°♎13'26	
minimum elong	-5203 Nov 08 j 08:40	9°♎09'18	0°19'04		-5197 Feb 02 j 01:41	30°♎♎	
	-5203 Dec 04 j 20:49	0°♎		opposition	-5197 Feb 22 j 15:28	24°♎17'31	5°02'31
	-5202 Jan 12 j 10:53	0°♎		greatest brilliancy	-5197 Feb 24 j 17:41	23°♎34'09	-2.1m
morning rise	-5202 Jan 14 j 17:52	1°♎45'24		min. Earth dist.	-5197 Mar 03 j 01:39	21°♎23'49	0.49376 AU
	-5202 Feb 21 j 07:16	0°♎		direct	-5197 Apr 01 j 16:40	15°♎47'20	
	-5202 Apr 04 j 03:44	0°♎			-5197 May 22 j 03:26	0°♎	
	-5202 May 18 j 17:16	0°♎		desc. node	-5197 Jun 05 j 01:40	7°♎20'52	
	-5202 Jul 06 j 04:24	0°♎			-5197 Jul 11 j 07:29	0°♎	
	-5202 Sep 01 j 23:32	0°♎			-5197 Aug 22 j 13:56	0°♎	
asc. node	-5202 Sep 02 j 11:40	0°♎12'56			-5197 Oct 01 j 22:14	0°♎	
retrograde	-5202 Oct 24 j 12:15	13°♎11'33			-5197 Nov 11 j 07:52	0°♎	
opposition	-5202 Dec 02 j 22:31	3°♎49'48	3°09'31		-5197 Dec 22 j 20:03	0°♎	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 21

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5196 Feb 03 j 23:54	0°♊				-5192 Sep 25 j 15:09	0°♏		
evening set	-5196 Mar 05 j 18:30	20°♊40'40				-5192 Nov 05 j 23:54	0°♐		
	-5196 Mar 19 j 21:29	0°♋				-5192 Dec 16 j 06:01	0°♑		
asc. node	-5196 Apr 24 j 02:46	22°♋53'42			desc. node	-5191 Jan 25 j 05:07	0°♒07'11		
						-5191 Jan 25 j 01:18	0°♓		
conjunction	-5196 Apr 25 j 01:20	23°♋30'02	0°00'33			-5191 Mar 06 j 10:12	0°♈		
minimum elong	-5196 Apr 25 j 01:17	23°♋29'57	0°00'28			-5191 Apr 18 j 03:27	0°♉		
behind sun begin	-5196 Apr 24 j 05:16	22°♋57'44				-5191 Jun 07 j 12:22	0°♊		
behind sun end	-5196 Apr 25 j 21:18	24°♋02'09			retrograde	-5191 Jul 30 j 15:22	15°♊29'43		
max. Earth dist.	-5196 May 03 j 22:49	29°♋13'06	2.65542 AU		min. Earth dist.	-5191 Aug 31 j 16:57	8°♊32'15	0.55175 AU	
	-5196 May 05 j 04:03	0°♌			greatest brilliancy	-5191 Sep 06 j 05:25	6°♊24'46	-1.8m	
morning rise	-5196 Jun 11 j 08:58	23°♌45'26			opposition	-5191 Sep 07 j 10:43	5°♊56'29	-3°-57'-29	
	-5196 Jun 21 j 04:26	0°♍				-5191 Sep 25 j 13:21	30°♋		
	-5196 Aug 07 j 09:14	0°♎			direct	-5191 Oct 13 j 04:24	27°♋54'59		
	-5196 Sep 23 j 14:49	0°♏				-5191 Oct 31 j 21:51	0°♌		
	-5196 Nov 10 j 10:24	0°♐			asc. node	-5191 Dec 14 j 22:03	15°♌43'23		
	-5196 Dec 30 j 19:05	0°♑				-5190 Jan 12 j 13:43	0°♍		
	-5195 Mar 07 j 15:19	0°♒				-5190 Mar 06 j 22:22	0°♎		
retrograde	-5195 Mar 30 j 10:12	3°♒02'40				-5190 Apr 25 j 11:41	0°♏		
desc. node	-5195 Apr 22 j 03:10	29°♒59'28				-5190 Jun 11 j 11:43	0°♐		
	-5195 Apr 22 j 02:17	30°♒			evening set	-5190 Jul 02 j 23:39	14°♐16'00		
opposition	-5195 Apr 29 j 23:28	27°♒56'45	0°-35'-47		max. Earth dist.	-5190 Jul 20 j 06:09	25°♐59'55	2.53690 AU	
greatest brilliancy	-5195 Apr 30 j 01:28	27°♒55'24	-2.9m			-5190 Jul 26 j 01:37	0°♑		
min. Earth dist.	-5195 May 03 j 00:21	27°♒07'17	0.38423 AU						
direct	-5195 May 31 j 08:34	22°♒30'40			conjunction	-5190 Aug 21 j 14:33	18°♑38'19	1°03'46	
	-5195 Jul 05 j 11:14	0°♓			minimum elong	-5190 Aug 21 j 15:59	18°♑40'52	1°04'02	
	-5195 Aug 30 j 12:46	0°♔				-5190 Sep 06 j 09:21	0°♒		
	-5195 Oct 15 j 12:08	0°♈			morning rise	-5190 Oct 13 j 04:51	27°♒14'38		
	-5195 Nov 29 j 05:52	0°♉				-5190 Oct 16 j 20:35	0°♑		
	-5194 Jan 13 j 12:05	0°♊				-5190 Nov 25 j 01:53	0°♒		
	-5194 Feb 28 j 18:01	0°♋			desc. node	-5190 Dec 13 j 02:09	13°♒56'56		
asc. node	-5194 Mar 11 j 23:15	7°♋11'32				-5189 Jan 02 j 18:56	0°♓		
evening set	-5194 Apr 16 j 06:19	29°♋41'25				-5189 Feb 10 j 20:31	0°♈		
	-5194 Apr 16 j 18:01	0°♌				-5189 Mar 23 j 06:54	0°♉		
max. Earth dist.	-5194 May 27 j 19:14	26°♌07'55	2.66830 AU			-5189 May 05 j 10:58	0°♊		
						-5189 Jun 23 j 10:19	0°♋		
conjunction	-5194 Jun 02 j 14:53	29°♌51'02	0°43'15		retrograde	-5189 Sep 06 j 23:44	25°♋47'38		
minimum elong	-5194 Jun 02 j 13:37	29°♌49'00	0°43'22		min. Earth dist.	-5189 Oct 13 j 19:15	17°♋07'24	0.64061 AU	
	-5194 Jun 02 j 20:30	0°♍			opposition	-5189 Oct 16 j 23:37	15°♋50'42	0°-37'-42	
morning rise	-5194 Jul 18 j 02:38	29°♍11'10			greatest brilliancy	-5189 Oct 16 j 21:14	15°♋53'05	-1.4m	
	-5194 Jul 19 j 08:36	0°♎			asc. node	-5189 Nov 02 j 00:00	10°♋01'56		
	-5194 Sep 02 j 19:11	0°♏			direct	-5189 Nov 24 j 19:30	6°♋37'23		
	-5194 Oct 17 j 02:12	0°♐				-5188 Feb 08 j 09:11	0°♌		
	-5194 Nov 29 j 10:45	0°♑				-5188 Apr 03 j 10:19	0°♍		
	-5193 Jan 11 j 08:25	0°♒				-5188 May 22 j 03:14	0°♎		
	-5193 Feb 23 j 22:31	0°♓				-5188 Jul 06 j 03:55	0°♏		
desc. node	-5193 Mar 10 j 04:39	9°♓25'09			evening set	-5188 Aug 17 j 21:27	0°♐23'24		
	-5193 Apr 13 j 03:04	0°♈				-5188 Aug 17 j 08:40	0°♑		
retrograde	-5193 Jun 11 j 20:24	19°♈40'20			max. Earth dist.	-5188 Sep 07 j 13:08	15°♐41'54	2.41521 AU	
min. Earth dist.	-5193 Jul 08 j 22:10	14°♈51'02	0.42794 AU			-5188 Sep 26 j 10:18	0°♑		
greatest brilliancy	-5193 Jul 14 j 10:46	13°♈04'35	-2.5m						
opposition	-5193 Jul 16 j 13:29	12°♈23'26	-6°-20'-5		conjunction	-5188 Oct 13 j 19:56	13°♑23'24	0°11'42	
direct	-5193 Aug 16 j 23:59	6°♈23'06			minimum elong	-5188 Oct 13 j 20:51	13°♑25'09	0°11'47	
	-5193 Oct 28 j 04:13	0°♉			behind sun begin	-5188 Oct 13 j 02:47	12°♑50'13		
	-5193 Dec 20 j 09:31	0°♊			behind sun end	-5188 Oct 14 j 14:54	14°♑00'06		
asc. node	-5192 Jan 27 j 21:53	23°♊11'23			desc. node	-5188 Oct 29 j 22:17	25°♑54'45		
	-5192 Feb 08 j 01:42	0°♋				-5188 Nov 04 j 03:47	0°♒		
	-5192 Mar 27 j 17:51	0°♌				-5188 Dec 12 j 09:33	0°♓		
	-5192 May 14 j 12:40	0°♍			morning rise	-5188 Dec 17 j 03:15	3°♓42'33		
evening set	-5192 May 23 j 20:23	5°♍56'28				-5187 Jan 20 j 00:49	0°♈		
max. Earth dist.	-5192 Jun 20 j 15:18	23°♍53'00	2.62740 AU			-5187 Feb 28 j 22:14	0°♉		
	-5192 Jun 29 j 23:26	0°♎				-5187 Apr 11 j 21:38	0°♊		
						-5187 May 26 j 22:25	0°♋		
conjunction	-5192 Jul 09 j 19:53	6°♎30'22	1°08'53			-5187 Jul 16 j 04:25	0°♌		
minimum elong	-5192 Jul 09 j 19:08	6°♎29'08	1°09'09		asc. node	-5187 Sep 19 j 02:16	27°♌35'16		
	-5192 Aug 13 j 16:49	0°♏				-5187 Oct 03 j 16:30	0°♍		
morning rise	-5192 Aug 25 j 13:12	8°♏09'32			retrograde	-5187 Oct 10 j 19:47	0°♎18'56		

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 22

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5187 Oct 17 j 19:15	30° \mathbb{R} Υ			-5182 Nov 19 j 16:57	0° \mathbb{Z}	
opposition	-5187 Nov 19 j 15:02	20° Υ 42'32	2°13'13		-5182 Dec 30 j 15:49	0° \mathbb{Z}	
greatest brilliancy	-5187 Nov 19 j 15:01	20° Υ 42'33	-1.3m		-5181 Feb 11 j 08:55	0° \approx	
min. Earth dist.	-5187 Nov 20 j 04:33	20° Υ 29'01	0.67067 AU	evening set	-5181 Feb 16 j 15:23	3° \approx 36'39	
direct	-5187 Dec 30 j 07:28	10° Υ 51'12			-5181 Mar 27 j 22:48	0° \mathbb{X}	
	-5186 Mar 06 j 14:03	0° \mathbb{X}					
	-5186 Apr 30 j 08:42	0° \mathbb{I}		conjunction	-5181 Apr 09 j 22:15	8° \mathbb{X} 31'47	0°-18'-4
	-5186 Jun 16 j 01:56	0° \mathbb{S}		minimum elong	-5181 Apr 09 j 23:02	8° \mathbb{X} 33'04	0°18'12
	-5186 Jul 28 j 18:09	0° \mathbb{Q}		max. Earth dist.	-5181 Apr 25 j 07:15	18° \mathbb{X} 32'14	2.63555 AU
	-5186 Sep 06 j 20:29	0° \mathbb{M}		asc. node	-5181 May 11 j 20:17	29° \mathbb{X} 12'38	
desc. node	-5186 Sep 16 j 19:45	7° \mathbb{M} 40'02			-5181 May 13 j 01:47	0° Υ	
	-5186 Oct 15 j 11:04	0° \mathbb{A}		morning rise	-5181 May 28 j 19:08	10° Υ 03'38	
evening set	-5186 Oct 17 j 08:01	1° \mathbb{A} 28'15			-5181 Jun 29 j 05:01	0° \mathbb{X}	
	-5186 Nov 22 j 13:56	0° \mathbb{M}			-5181 Aug 15 j 22:53	0° \mathbb{I}	
					-5181 Oct 03 j 12:43	0° \mathbb{S}	
conjunction	-5186 Dec 21 j 10:31	22° \mathbb{M} 30'48	0°-58'-39		-5181 Nov 23 j 15:02	0° \mathbb{Q}	
minimum elong	-5186 Dec 21 j 07:36	22° \mathbb{M} 25'08	0°58'52		-5180 Jan 26 j 13:52	0° \mathbb{M}	
	-5186 Dec 31 j 03:43	0° \mathbb{Z}		retrograde	-5180 Feb 28 j 12:32	5° \mathbb{M} 53'27	
max. Earth dist.	-5185 Feb 08 j 01:20	29° \mathbb{Z} 17'42	2.42197 AU	opposition	-5180 Mar 31 j 09:43	0° \mathbb{M} 12'52	2°36'29
	-5185 Feb 09 j 00:18	0° \mathbb{Z}			-5180 Apr 01 j 02:56	30° \mathbb{R} \mathbb{Q}	
morning rise	-5185 Feb 24 j 22:03	11° \mathbb{Z} 36'22		greatest brilliancy	-5180 Apr 01 j 11:43	29° \mathbb{Q} 53'26	-2.6m
	-5185 Mar 22 j 19:07	0° \approx		min. Earth dist.	-5180 Apr 07 j 09:09	28° \mathbb{Q} 08'37	0.41695 AU
	-5185 May 05 j 23:06	0° \mathbb{X}		direct	-5180 May 04 j 12:04	23° \mathbb{Q} 34'41	
	-5185 Jun 21 j 22:40	0° Υ		desc. node	-5180 May 08 j 19:31	23° \mathbb{Q} 42'17	
asc. node	-5185 Aug 07 j 02:06	27° Υ 10'34			-5180 Jun 05 j 13:42	0° \mathbb{M}	
	-5185 Aug 12 j 04:53	0° \mathbb{X}			-5180 Jul 31 j 12:05	0° \mathbb{A}	
	-5185 Oct 18 j 12:49	0° \mathbb{I}			-5180 Sep 13 j 18:29	0° \mathbb{M}	
retrograde	-5185 Nov 16 j 06:14	4° \mathbb{I} 27'44			-5180 Oct 26 j 07:46	0° \mathbb{Z}	
	-5185 Dec 12 j 17:31	30° \mathbb{R} \mathbb{X}			-5180 Dec 08 j 06:51	0° \mathbb{Z}	
opposition	-5185 Dec 24 j 18:40	25° \mathbb{X} 35'54	4°24'24		-5179 Jan 21 j 11:14	0° \approx	
greatest brilliancy	-5185 Dec 25 j 13:32	25° \mathbb{X} 17'32	-1.4m		-5179 Mar 08 j 01:15	0° \mathbb{X}	
min. Earth dist.	-5185 Dec 29 j 03:18	23° \mathbb{X} 54'00	0.63759 AU	asc. node	-5179 Mar 28 j 15:45	13° \mathbb{X} 18'58	
direct	-5184 Feb 03 j 22:43	15° \mathbb{X} 36'19		evening set	-5179 Mar 31 j 17:31	15° \mathbb{X} 17'33	
	-5184 Mar 29 j 06:20	0° \mathbb{I}			-5179 Apr 23 j 16:24	0° Υ	
	-5184 May 22 j 14:46	0° \mathbb{S}					
	-5184 Jul 06 j 07:37	0° \mathbb{Q}		conjunction	-5179 May 18 j 21:46	16° Υ 05'51	0°28'04
desc. node	-5184 Aug 03 j 17:50	20° \mathbb{Q} 40'48		minimum elong	-5179 May 18 j 20:48	16° Υ 04'19	0°28'06
	-5184 Aug 16 j 03:44	0° \mathbb{M}		max. Earth dist.	-5179 May 18 j 13:06	15° Υ 52'02	2.66970 AU
	-5184 Sep 24 j 02:44	0° \mathbb{A}			-5179 Jun 09 j 16:32	0° \mathbb{X}	
	-5184 Nov 01 j 11:49	0° \mathbb{M}		morning rise	-5179 Jul 03 j 18:43	15° \mathbb{X} 25'57	
	-5184 Dec 10 j 08:18	0° \mathbb{Z}			-5179 Jul 26 j 08:59	0° \mathbb{I}	
evening set	-5184 Dec 23 j 04:17	9° \mathbb{Z} 42'57			-5179 Sep 10 j 08:04	0° \mathbb{S}	
	-5183 Jan 19 j 12:18	0° \mathbb{Z}			-5179 Oct 25 j 14:09	0° \mathbb{Q}	
					-5179 Dec 09 j 12:09	0° \mathbb{M}	
conjunction	-5183 Feb 21 j 01:51	23° \mathbb{Z} 22'02	-1°00'-14		-5178 Jan 24 j 00:42	0° \mathbb{A}	
minimum elong	-5183 Feb 21 j 03:46	23° \mathbb{Z} 25'24	1°00'31		-5178 Mar 14 j 11:59	0° \mathbb{M}	
	-5183 Mar 02 j 13:09	0° \approx		desc. node	-5178 Mar 26 j 21:38	6° \mathbb{M} 27'11	
max. Earth dist.	-5183 Mar 27 j 03:29	16° \approx 53'42	2.54848 AU	retrograde	-5178 May 17 j 09:31	21° \mathbb{M} 11'43	
	-5183 Apr 15 j 16:23	0° \mathbb{X}		min. Earth dist.	-5178 Jun 13 j 10:29	16° \mathbb{M} 44'08	0.39043 AU
morning rise	-5183 Apr 17 j 13:23	1° \mathbb{X} 14'39		greatest brilliancy	-5178 Jun 17 j 05:06	15° \mathbb{M} 40'01	-2.8m
	-5183 May 31 j 19:54	0° Υ		opposition	-5178 Jun 18 j 12:14	15° \mathbb{M} 17'50	-5°-28'-56
asc. node	-5183 Jun 23 j 23:53	14° Υ 36'39		direct	-5178 Jul 18 j 15:20	10° \mathbb{M} 04'49	
	-5183 Jul 18 j 22:01	0° \mathbb{X}			-5178 Sep 20 j 07:10	0° \mathbb{Z}	
	-5183 Sep 07 j 17:21	0° \mathbb{I}			-5178 Nov 11 j 20:09	0° \mathbb{Z}	
	-5183 Nov 05 j 17:44	0° \mathbb{S}			-5178 Dec 30 j 06:34	0° \approx	
retrograde	-5183 Dec 29 j 02:23	13° \mathbb{S} 18'49		asc. node	-5177 Feb 13 j 13:19	28° \approx 22'20	
opposition	-5182 Feb 03 j 00:37	5° \mathbb{S} 41'40	5°23'25		-5177 Feb 16 j 03:40	0° \mathbb{X}	
greatest brilliancy	-5182 Feb 04 j 22:48	4° \mathbb{S} 59'35	-1.8m		-5177 Apr 04 j 23:59	0° Υ	
min. Earth dist.	-5182 Feb 10 j 18:54	2° \mathbb{S} 52'28	0.54338 AU	evening set	-5177 May 09 j 21:27	22° Υ 01'00	
	-5182 Feb 19 j 12:18	30° \mathbb{R} \mathbb{I}			-5177 May 22 j 10:36	0° \mathbb{X}	
direct	-5182 Mar 14 j 15:00	26° \mathbb{I} 26'23		max. Earth dist.	-5177 Jun 11 j 18:06	13° \mathbb{X} 01'26	2.64970 AU
	-5182 Apr 07 j 15:08	0° \mathbb{S}					
	-5182 Jun 08 j 16:50	0° \mathbb{Q}		conjunction	-5177 Jun 25 j 16:59	22° \mathbb{X} 03'45	1°01'44
desc. node	-5182 Jun 21 j 17:23	8° \mathbb{Q} 21'01		minimum elong	-5177 Jun 25 j 15:49	22° \mathbb{X} 01'50	1°01'56
	-5182 Jul 23 j 01:38	0° \mathbb{M}			-5177 Jul 07 j 20:38	0° \mathbb{I}	
	-5182 Sep 01 j 14:10	0° \mathbb{A}		morning rise	-5177 Aug 10 j 12:33	22° \mathbb{I} 22'21	
	-5182 Oct 10 j 23:49	0° \mathbb{M}			-5177 Aug 21 j 19:03	0° \mathbb{S}	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 23

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5177 Oct 04 j 03:26	0°♂		greatest brilliancy	-5172 Nov 06 j 07:26	7°♂38'01	-1.3m
	-5177 Nov 15 j 02:11	0°♍			-5172 Nov 28 j 16:13	30°♍38'	
	-5177 Dec 26 j 01:22	0°♊		direct	-5172 Dec 16 j 11:45	27°♍56'06	
	-5176 Feb 04 j 17:15	0°♋			-5171 Jan 04 j 13:29	0°♂	
desc. node	-5176 Feb 11 j 21:49	5°♋16'12			-5171 Mar 18 j 16:12	0°♂	
	-5176 Mar 17 j 08:30	0°♌			-5171 May 09 j 00:28	0°♈	
	-5176 May 02 j 02:27	0°♍			-5171 Jun 23 j 20:46	0°♍	
retrograde	-5176 Jul 13 j 05:53	26°♍30'57			-5171 Aug 05 j 06:51	0°♂	
min. Earth dist.	-5176 Aug 12 j 03:28	20°♍24'49	0.50433 AU		-5171 Sep 14 j 08:01	0°♍	
greatest brilliancy	-5176 Aug 18 j 03:15	18°♍12'48	-2.1m	evening set	-5171 Sep 21 j 21:49	5°♍49'10	
opposition	-5176 Aug 19 j 22:26	17°♍32'56	-5°-13'-1	desc. node	-5171 Oct 03 j 13:46	14°♍50'59	
direct	-5176 Sep 23 j 02:02	10°♍12'59			-5171 Oct 22 j 23:02	0°♊	
	-5176 Nov 28 j 06:01	0°♋					
asc. node	-5176 Dec 31 j 12:57	17°♋15'28		conjunction	-5171 Nov 23 j 18:37	25°♊01'54	0°-35'-51
	-5175 Jan 23 j 05:51	0°♌		minimum elong	-5171 Nov 23 j 15:41	24°♊56'08	0°35'56
	-5175 Mar 15 j 02:11	0°♍			-5171 Nov 30 j 02:20	0°♋	
	-5175 May 02 j 18:35	0°♎		max. Earth dist.	-5171 Dec 18 j 16:04	14°♋31'59	2.38064 AU
evening set	-5175 Jun 16 j 20:48	28°♎55'49			-5170 Jan 07 j 15:45	0°♌	
	-5175 Jun 18 j 11:56	0°♈		morning rise	-5170 Jan 30 j 08:01	17°♌14'16	
max. Earth dist.	-5175 Jul 07 j 15:51	12°♈42'49	2.57798 AU		-5170 Feb 16 j 11:23	0°♍	
	-5175 Aug 02 j 02:19	0°♎			-5170 Mar 30 j 05:58	0°♋	
					-5170 May 13 j 13:51	0°♌	
conjunction	-5175 Aug 03 j 23:52	1°♎18'32	1°10'31		-5170 Jun 30 j 07:11	0°♍	
minimum elong	-5175 Aug 04 j 00:21	1°♎19'22	1°10'49	asc. node	-5170 Aug 23 j 17:52	0°♎03'38	
	-5175 Sep 13 j 14:49	0°♏			-5170 Aug 23 j 14:53	0°♎	
morning rise	-5175 Sep 22 j 13:04	6°♏28'26		retrograde	-5170 Nov 01 j 14:27	21°♎07'18	
	-5175 Oct 24 j 08:57	0°♍		opposition	-5170 Dec 10 j 18:01	11°♎55'12	3°39'12
	-5175 Dec 02 j 21:50	0°♊		greatest brilliancy	-5170 Dec 11 j 03:34	11°♎45'46	-1.3m
desc. node	-5175 Dec 29 j 21:38	20°♊44'54		min. Earth dist.	-5170 Dec 13 j 14:58	10°♎47'07	0.65807 AU
	-5174 Jan 10 j 22:19	0°♋		direct	-5169 Jan 20 j 21:59	1°♎54'31	
	-5174 Feb 19 j 07:30	0°♌			-5169 Apr 13 j 11:18	0°♈	
	-5174 Apr 01 j 05:30	0°♍			-5169 Jun 02 j 04:28	0°♎	
	-5174 May 15 j 14:39	0°♋			-5169 Jul 15 j 18:57	0°♏	
	-5174 Jul 09 j 03:48	0°♌		desc. node	-5169 Aug 21 j 11:14	27°♏08'47	
retrograde	-5174 Aug 23 j 20:31	11°♌23'12			-5169 Aug 25 j 05:19	0°♍	
min. Earth dist.	-5174 Sep 27 j 23:13	3°♌18'08	0.61241 AU		-5169 Oct 02 j 23:22	0°♊	
opposition	-5174 Oct 02 j 14:02	1°♌27'40	-1°-52'-49		-5169 Nov 10 j 04:43	0°♋	
greatest brilliancy	-5174 Oct 02 j 04:00	1°♌37'41	-1.5m	evening set	-5169 Nov 28 j 11:48	14°♋16'27	
	-5174 Oct 06 j 06:52	30°♌37'			-5169 Dec 18 j 21:18	0°♌	
direct	-5174 Nov 09 j 08:19	22°♌37'28			-5168 Jan 27 j 21:08	0°♍	
asc. node	-5174 Nov 18 j 13:57	23°♌08'49					
	-5174 Dec 17 j 04:52	0°♌		conjunction	-5168 Jan 30 j 15:59	2°♍02'29	-1°-8'-11
	-5173 Feb 19 j 16:10	0°♍		minimum elong	-5168 Jan 30 j 16:42	2°♍03'46	1°08'29
	-5173 Apr 12 j 17:17	0°♎			-5168 Mar 09 j 18:18	0°♋	
	-5173 May 30 j 13:47	0°♈		max. Earth dist.	-5168 Mar 12 j 11:49	1°♋54'14	2.50191 AU
	-5173 Jul 14 j 08:49	0°♎		morning rise	-5168 Mar 29 j 22:02	13°♋54'40	
evening set	-5173 Jul 30 j 08:57	11°♎10'38			-5168 Apr 22 j 19:53	0°♌	
max. Earth dist.	-5173 Aug 14 j 18:59	22°♎10'20	2.46391 AU		-5168 Jun 08 j 03:33	0°♍	
	-5173 Aug 25 j 14:07	0°♏		asc. node	-5168 Jul 10 j 16:46	20°♍11'29	
					-5168 Jul 27 j 00:20	0°♎	
conjunction	-5173 Sep 21 j 18:04	20°♏08'09	0°38'02		-5168 Sep 18 j 12:53	0°♈	
minimum elong	-5173 Sep 21 j 20:09	20°♏12'04	0°38'12	retrograde	-5168 Dec 10 j 15:25	27°♈23'29	
	-5173 Oct 04 j 18:53	0°♍		opposition	-5167 Jan 16 j 18:32	19°♈12'20	5°13'54
	-5173 Nov 12 j 16:11	0°♊		greatest brilliancy	-5167 Jan 18 j 06:39	18°♈38'15	-1.6m
desc. node	-5173 Nov 16 j 18:15	3°♊11'10		min. Earth dist.	-5167 Jan 23 j 08:06	16°♈43'54	0.58699 AU
morning rise	-5173 Nov 20 j 04:03	5°♊50'49		direct	-5167 Feb 26 j 07:38	9°♈30'04	
	-5173 Dec 21 j 01:21	0°♋			-5167 May 02 j 09:37	0°♎	
greatest brilliancy	-5173 Dec 30 j 06:10	7°♋10'40	1.2m		-5167 Jun 20 j 16:35	0°♏	
	-5172 Jan 28 j 19:01	0°♌		desc. node	-5167 Jul 08 j 10:52	12°♏15'35	
	-5172 Mar 08 j 18:54	0°♍			-5167 Aug 01 j 23:12	0°♍	
	-5172 Apr 20 j 00:05	0°♋			-5167 Sep 10 j 14:41	0°♊	
	-5172 Jun 04 j 20:14	0°♌			-5167 Oct 19 j 11:01	0°♋	
	-5172 Jul 28 j 15:26	0°♍			-5167 Nov 27 j 17:10	0°♌	
retrograde	-5172 Sep 27 j 09:32	17°♍23'35			-5166 Jan 07 j 06:15	0°♍	
asc. node	-5172 Oct 05 j 15:59	16°♍56'27		evening set	-5166 Jan 27 j 19:14	14°♍43'13	
min. Earth dist.	-5172 Nov 05 j 11:40	7°♍57'53	0.66625 AU		-5166 Feb 18 j 15:04	0°♋	
opposition	-5172 Nov 06 j 09:33	7°♍35'53	1°11'18				

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 24

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

conjunction	-5166 Mar 23 j 15:14	22° 27 '18	0°-36'-17			-5161 Feb 15 j 21:56	0° 11 '	
minimum elong	-5166 Mar 23 j 16:48	22° 29 '56	0°36'28	desc. node		-5161 Feb 28 j 16:20	8° 11 '53'47	
	-5166 Apr 03 j 23:07	0° 11 '				-5161 Apr 01 j 08:00	0° 11 '	
max. Earth dist.	-5166 Apr 14 j 21:18	7° 11 '12'29	2.60764 AU			-5161 May 29 j 23:31	0° 11 '	
morning rise	-5166 May 13 j 13:54	25° 11 '51'36		retrograde		-5161 Jun 24 j 10:53	4° 11 '19'43	
	-5166 May 20 j 00:30	0° 11 '				-5161 Jul 19 j 13:15	30° 11 ' 11 '	
asc. node	-5166 May 28 j 12:56	5° 11 '26'56		min. Earth dist.		-5161 Jul 22 j 07:20	29° 11 '06'31	0.45389 AU
	-5166 Jul 06 j 09:23	0° 11 '		greatest brilliancy		-5161 Jul 28 j 05:57	27° 11 '05'14	-2.3m
	-5166 Aug 23 j 22:30	0° 11 '		opposition		-5161 Jul 30 j 10:06	26° 11 '20'33	-6°-9'-19
	-5166 Oct 13 j 15:38	0° 11 '		direct		-5161 Aug 31 j 18:11	19° 11 '25'58	
	-5166 Dec 11 j 07:33	0° 11 '				-5161 Oct 14 j 14:30	0° 11 '	
retrograde	-5165 Feb 01 j 15:56	13° 11 '04'03				-5161 Dec 13 j 05:49	0° 11 '	
opposition	-5165 Mar 07 j 05:18	6° 11 '34'11	4°28'53	asc. node		-5160 Jan 18 j 03:07	20° 11 ' 11 '50'42	
greatest brilliancy	-5165 Mar 09 j 03:53	5° 11 '55'33	-2.3m			-5160 Feb 02 j 11:18	0° 11 '	
min. Earth dist.	-5165 Mar 15 j 13:52	3° 11 '04'11	0.46497 AU			-5160 Mar 22 j 18:46	0° 11 '	
	-5165 Mar 30 j 02:25	30° 11 ' 11 '				-5160 May 09 j 20:35	0° 11 '	
direct	-5165 Apr 13 j 00:45	28° 11 ' 11 '39'00		evening set		-5160 Jun 01 j 12:09	14° 11 ' 11 '27'31	
	-5165 Apr 27 j 05:44	0° 11 '				-5160 Jun 25 j 09:38	0° 11 '	
desc. node	-5165 May 26 j 11:07	9° 11 '04'20		max. Earth dist.		-5160 Jun 26 j 16:04	0° 11 '50'03	2.61184 AU
	-5165 Jul 02 j 06:58	0° 11 '						
	-5165 Aug 15 j 14:05	0° 11 '		conjunction		-5160 Jul 18 j 17:52	15° 11 ' 11 '30'34	1°11'00
	-5165 Sep 25 j 20:04	0° 11 '		minimum elong		-5160 Jul 18 j 17:30	15° 11 ' 11 '29'57	1°11'16
	-5165 Nov 05 j 19:00	0° 11 '				-5160 Aug 09 j 02:04	0° 11 '	
	-5165 Dec 17 j 16:37	0° 11 '		morning rise		-5160 Sep 04 j 05:43	18° 11 ' 11 '09	
	-5164 Jan 30 j 03:11	0° 11 '				-5160 Sep 20 j 20:54	0° 11 '	
evening set	-5164 Mar 15 j 11:38	0° 11 '10'36				-5160 Nov 01 j 00:14	0° 11 '	
	-5164 Mar 15 j 05:09	0° 11 '				-5160 Dec 10 j 23:37	0° 11 '	
asc. node	-5164 Apr 14 j 08:47	19° 11 ' 11 '34'49		desc. node		-5159 Jan 15 j 15:07	27° 11 ' 11 '05'10	
	-5164 Apr 30 j 13:46	0° 11 '				-5159 Jan 19 j 11:11	0° 11 '	
						-5159 Feb 28 j 09:12	0° 11 '	
conjunction	-5164 May 03 j 21:14	2° 11 '07'19	0°11'01			-5159 Apr 11 j 04:48	0° 11 '	
minimum elong	-5164 May 03 j 20:49	2° 11 '06'38	0°11'00			-5159 May 28 j 04:26	0° 11 '	
behind sun begin	-5164 May 03 j 06:21	1° 11 '43'29		retrograde		-5159 Aug 08 j 19:46	25° 11 ' 11 '38'54	
behind sun end	-5164 May 04 j 11:17	2° 11 '29'47		min. Earth dist.		-5159 Sep 11 j 00:29	18° 11 ' 11 '15'23	0.57528 AU
max. Earth dist.	-5164 May 09 j 10:50	5° 11 '41'04	2.66283 AU	greatest brilliancy		-5159 Sep 16 j 03:04	16° 11 ' 11 '15'24	-1.7m
	-5164 Jun 16 j 13:28	0° 11 '		opposition		-5159 Sep 17 j 00:34	15° 11 ' 11 '54'18	-3°-11'-50
morning rise	-5164 Jun 19 j 13:26	1° 11 ' 11 '54'40		direct		-5159 Oct 23 j 12:32	7° 11 ' 11 '33'32	
	-5164 Aug 02 j 13:02	0° 11 '		asc. node		-5159 Dec 05 j 04:05	16° 11 ' 11 '46'46	
	-5164 Sep 18 j 05:54	0° 11 '				-5158 Jan 04 j 09:36	0° 11 '	
	-5164 Nov 03 j 22:13	0° 11 '				-5158 Mar 01 j 04:40	0° 11 '	
	-5164 Dec 21 j 13:23	0° 11 '				-5158 Apr 20 j 11:59	0° 11 '	
	-5163 Feb 11 j 15:26	0° 11 '				-5158 Jun 06 j 18:58	0° 11 '	
desc. node	-5163 Apr 12 j 14:05	20° 11 ' 11 '14'51		evening set		-5158 Jul 12 j 13:54	23° 11 ' 11 '53'57	
retrograde	-5163 Apr 17 j 07:34	20° 11 ' 11 '23'30				-5158 Jul 21 j 11:00	0° 11 '	
opposition	-5163 May 17 j 22:51	15° 11 ' 11 '17'49	-2°-40'-57	max. Earth dist.		-5158 Jul 28 j 11:54	4° 11 ' 11 '52'57	2.51202 AU
greatest brilliancy	-5163 May 17 j 20:54	15° 11 ' 11 '19'07	-2.9m					
min. Earth dist.	-5163 May 17 j 21:19	15° 11 ' 11 '18'51	0.37740 AU	conjunction		-5158 Sep 01 j 07:21	29° 11 ' 11 '04'13	0°56'39
direct	-5163 Jun 17 j 04:44	10° 11 ' 11 '13'48		minimum elong		-5158 Sep 01 j 09:14	29° 11 ' 11 '04'38	0°56'54
	-5163 Aug 18 j 03:18	0° 11 '				-5158 Sep 01 j 18:14	0° 11 '	
	-5163 Oct 07 j 15:08	0° 11 '				-5158 Oct 12 j 03:14	0° 11 '	
	-5163 Nov 23 j 00:13	0° 11 '		morning rise		-5158 Oct 26 j 01:10	10° 11 ' 11 '35'38	
	-5162 Jan 08 j 02:38	0° 11 '				-5158 Nov 20 j 05:23	0° 11 '	
	-5162 Feb 23 j 19:50	0° 11 '		desc. node		-5158 Dec 03 j 12:12	10° 11 ' 11 '19'02	
asc. node	-5162 Mar 02 j 04:55	4° 11 ' 11 '03'47				-5158 Dec 28 j 19:09	0° 11 '	
	-5162 Apr 12 j 01:52	0° 11 '				-5157 Feb 05 j 17:00	0° 11 '	
evening set	-5162 Apr 24 j 23:00	8° 11 '09'43				-5157 Mar 17 j 21:58	0° 11 '	
	-5162 May 29 j 06:51	0° 11 '				-5157 Apr 29 j 14:29	0° 11 '	
max. Earth dist.	-5162 Jun 02 j 05:38	2° 11 ' 11 '31'34	2.66404 AU			-5157 Jun 15 j 22:50	0° 11 '	
						-5157 Aug 19 j 08:16	0° 11 '	
conjunction	-5162 Jun 11 j 00:08	8° 11 ' 11 '09'00	0°50'55	retrograde		-5157 Sep 14 j 21:52	4° 11 '06'44	
minimum elong	-5162 Jun 10 j 22:49	8° 11 ' 11 '06'53	0°51'03			-5157 Oct 09 j 12:47	30° 11 ' 11 ' 11 '	
	-5162 Jul 14 j 17:58	0° 11 '		min. Earth dist.		-5157 Oct 22 j 13:50	25° 11 ' 11 '08'57	0.65230 AU
morning rise	-5162 Jul 26 j 11:07	7° 11 ' 11 '40'55		asc. node		-5157 Oct 23 j 06:38	24° 11 ' 11 '52'04	
	-5162 Aug 29 j 00:00	0° 11 '		opposition		-5157 Oct 24 j 22:34	24° 11 ' 11 '11'51	0°03'51
	-5162 Oct 11 j 22:16	0° 11 '		greatest brilliancy		-5157 Oct 24 j 22:17	24° 11 ' 11 '12'08	-1.4m
	-5162 Nov 23 j 16:59	0° 11 '		direct		-5157 Dec 03 j 05:57	14° 11 ' 11 '47'56	
	-5161 Jan 04 j 18:12	0° 11 '				-5156 Jan 30 j 07:07	0° 11 '	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 25

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5156 Mar 28 j 13:22	0°♄			-5151 Feb 25 j 19:52	0°♁		
	-5156 May 17 j 01:16	0°♂						
	-5156 Jul 01 j 08:46	0°♄		conjunction	-5151 Mar 04 j 18:16	4°♁48'16	0°-52'-36	
	-5156 Aug 12 j 15:55	0°♂		minimum elong	-5151 Mar 04 j 20:17	4°♁51'44	0°52'51	
evening set	-5156 Aug 29 j 20:59	12°♂42'58		max. Earth dist.	-5151 Apr 03 j 08:45	24°♁55'05	2.57179 AU	
	-5156 Sep 21 j 17:47	0°♄			-5151 Apr 10 j 23:40	0°♂		
max. Earth dist.	-5156 Sep 28 j 01:25	4°♄50'39	2.39238 AU	morning rise	-5151 Apr 27 j 09:47	10°♂49'39		
desc. node	-5156 Oct 20 j 08:32	22°♄07'10			-5151 May 27 j 01:14	0°♂		
				asc. node	-5151 Jun 14 j 05:33	11°♂32'43		
conjunction	-5156 Oct 27 j 23:15	28°♄04'11	0°-5'-35		-5151 Jul 13 j 19:08	0°♄		
minimum elong	-5156 Oct 27 j 22:47	28°♄03'16	0°05'34		-5151 Sep 01 j 13:27	0°♂		
behind sun begin	-5156 Oct 26 j 21:24	27°♄13'37			-5151 Oct 26 j 04:24	0°♄		
behind sun end	-5156 Oct 29 j 00:10	28°♄52'55		retrograde	-5150 Jan 09 j 16:26	23°♄37'06		
	-5156 Oct 30 j 10:25	0°♂		opposition	-5150 Feb 13 j 19:26	16°♄21'34	5°15'40	
	-5156 Dec 07 j 15:01	0°♄		greatest brilliancy	-5150 Feb 15 j 20:50	15°♄37'40	-2.0m	
morning rise	-5155 Jan 02 j 07:21	20°♄02'47		min. Earth dist.	-5150 Feb 22 j 00:18	13°♄27'29	0.51662 AU	
	-5155 Jan 15 j 04:51	0°♂		direct	-5150 Mar 24 j 14:55	7°♄28'20		
	-5155 Feb 24 j 00:24	0°♄			-5150 May 30 j 07:00	0°♂		
	-5155 Apr 06 j 20:27	0°♁		desc. node	-5150 Jun 12 j 05:01	7°♂36'17		
	-5155 May 21 j 12:06	0°♂			-5150 Jul 16 j 04:54	0°♄		
	-5155 Jul 09 j 11:45	0°♂			-5150 Aug 26 j 13:47	0°♂		
	-5155 Sep 08 j 22:31	0°♄			-5150 Oct 05 j 10:28	0°♄		
asc. node	-5155 Sep 09 j 08:21	0°♄08'55			-5150 Nov 14 j 11:11	0°♂		
retrograde	-5155 Oct 18 j 16:21	8°♄09'35			-5150 Dec 25 j 15:48	0°♄		
	-5155 Nov 23 j 22:59	30°♄			-5149 Feb 06 j 13:27	0°♁		
opposition	-5155 Nov 27 j 06:44	28°♂40'57	2°46'42	evening set	-5149 Feb 27 j 04:53	13°♁59'45		
greatest brilliancy	-5155 Nov 27 j 09:23	28°♂38'19	-1.3m		-5149 Mar 23 j 06:21	0°♂		
min. Earth dist.	-5155 Nov 28 j 16:07	28°♂07'39	0.66882 AU					
direct	-5154 Jan 07 j 04:14	18°♂44'56		conjunction	-5149 Apr 19 j 07:26	17°♂39'51	0°-7'-15	
	-5154 Feb 24 j 08:23	0°♄		minimum elong	-5149 Apr 19 j 07:44	17°♂40'19	0°07'20	
	-5154 Apr 24 j 05:12	0°♂		behind sun begin	-5149 Apr 18 j 13:21	17°♂10'34		
	-5154 Jun 10 j 19:00	0°♄		behind sun end	-5149 Apr 20 j 02:06	18°♂10'03		
	-5154 Jul 23 j 18:31	0°♂		max. Earth dist.	-5149 May 01 j 01:45	25°♂15'41	2.64768 AU	
	-5154 Sep 01 j 23:43	0°♄		asc. node	-5149 May 02 j 00:28	25°♂52'16		
desc. node	-5154 Sep 07 j 04:47	3°♄59'35			-5149 May 08 j 10:33	0°♂		
	-5154 Oct 10 j 15:30	0°♂		morning rise	-5149 Jun 06 j 05:48	18°♂24'25		
evening set	-5154 Nov 01 j 11:32	17°♂10'18			-5149 Jun 24 j 11:42	0°♄		
	-5154 Nov 17 j 19:05	0°♄			-5149 Aug 10 j 21:33	0°♂		
	-5154 Dec 26 j 09:20	0°♂			-5149 Sep 27 j 15:42	0°♄		
					-5149 Nov 15 j 15:16	0°♂		
conjunction	-5153 Jan 05 j 14:04	7°♂47'16	-1°-5'-51		-5148 Jan 08 j 08:52	0°♄		
minimum elong	-5153 Jan 05 j 12:22	7°♂44'03	1°06'07	retrograde	-5148 Mar 16 j 14:05	21°♄03'20		
	-5153 Feb 04 j 06:09	0°♄		opposition	-5148 Apr 16 j 13:09	15°♄45'49	0°56'01	
max. Earth dist.	-5153 Feb 22 j 12:28	13°♄18'19	2.45057 AU	greatest brilliancy	-5148 Apr 16 j 21:04	15°♄40'15	-2.8m	
morning rise	-5153 Mar 09 j 23:37	24°♄20'35		min. Earth dist.	-5148 Apr 21 j 16:13	14°♄19'20	0.39609 AU	
	-5153 Mar 18 j 00:40	0°♁		desc. node	-5148 Apr 29 j 06:35	12°♄20'39		
	-5153 May 01 j 02:05	0°♂		direct	-5148 May 19 j 02:24	9°♄50'38		
	-5153 Jun 16 j 17:28	0°♂			-5148 Jul 19 j 09:28	0°♂		
asc. node	-5153 Jul 28 j 08:15	25°♂07'09			-5148 Sep 05 j 18:10	0°♄		
	-5153 Aug 05 j 20:01	0°♄			-5148 Oct 19 j 20:33	0°♂		
	-5153 Oct 03 j 22:31	0°♂			-5148 Dec 02 j 15:34	0°♄		
retrograde	-5153 Nov 25 j 02:24	12°♄48'49			-5147 Jan 16 j 08:15	0°♁		
opposition	-5152 Jan 02 j 04:16	4°♄10'03	4°46'02		-5147 Mar 03 j 05:39	0°♂		
greatest brilliancy	-5152 Jan 03 j 05:10	3°♄46'00	-1.4m	asc. node	-5147 Mar 18 j 20:41	10°♂03'43		
min. Earth dist.	-5152 Jan 07 j 08:26	2°♄10'13	0.62213 AU	evening set	-5147 Apr 09 j 17:17	24°♂03'07		
	-5152 Jan 13 j 04:32	30°♄			-5147 Apr 19 j 01:02	0°♂		
direct	-5152 Feb 12 j 05:14	24°♄13'47		max. Earth dist.	-5147 May 23 j 23:01	22°♂14'56	2.67001 AU	
	-5152 Mar 15 j 09:29	0°♂						
	-5152 May 15 j 18:37	0°♄		conjunction	-5147 May 27 j 09:19	24°♂26'11	0°37'10	
	-5152 Jun 30 j 14:31	0°♂		minimum elong	-5147 May 27 j 08:08	24°♂24'19	0°37'15	
desc. node	-5152 Jul 25 j 03:36	17°♄35'44			-5147 Jun 05 j 02:25	0°♄		
	-5152 Aug 10 j 20:21	0°♄		morning rise	-5147 Jul 11 j 23:32	23°♄42'11		
	-5152 Sep 18 j 23:56	0°♂			-5147 Jul 21 j 16:37	0°♂		
	-5152 Oct 27 j 12:05	0°♄			-5147 Sep 05 j 09:02	0°♄		
	-5152 Dec 05 j 11:00	0°♂			-5147 Oct 20 j 01:53	0°♂		
evening set	-5151 Jan 05 j 19:11	23°♄27'48			-5147 Dec 03 j 01:23	0°♄		
	-5151 Jan 14 j 17:09	0°♄			-5146 Jan 15 j 21:37	0°♂		

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 26

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5146 Mar 02 j 05:02	0°♄			-5141 Apr 07 j 08:00	0°♄		
desc. node	-5146 Mar 17 j 08:19	9°♄21'03			-5141 May 25 j 16:49	0°♄		
	-5146 Apr 26 j 03:23	0°♄			-5141 Jul 09 j 16:16	0°♄		
retrograde	-5146 Jun 01 j 07:25	8°♄07'38		evening set	-5141 Aug 10 j 05:27	22°♄14'21		
min. Earth dist.	-5146 Jun 28 j 01:56	3°♄33'09	0.40893 AU		-5141 Aug 20 j 22:18	0°♄		
greatest brilliancy	-5146 Jul 03 j 00:32	2°♄02'59	-2.6m	max. Earth dist.	-5141 Aug 27 j 11:48	4°♄48'34	2.43643 AU	
opposition	-5146 Jul 04 j 21:24	1°♄28'32	-6°-11'-42		-5141 Sep 30 j 02:07	0°♄		
	-5146 Jul 09 j 19:55	30°♄						
direct	-5146 Aug 04 j 15:46	25°♄51'32		conjunction	-5141 Oct 04 j 11:38	3°♄21'31	0°23'51	
	-5146 Aug 30 j 22:49	0°♄		minimum elong	-5141 Oct 04 j 13:15	3°♄24'36	0°23'58	
	-5146 Nov 03 j 11:04	0°♄		desc. node	-5141 Nov 07 j 02:45	29°♄23'17		
	-5146 Dec 24 j 02:59	0°♄			-5141 Nov 07 j 21:33	0°♄		
asc. node	-5145 Feb 03 j 19:08	25°♄36'24		morning rise	-5141 Dec 05 j 16:59	21°♄46'59		
	-5145 Feb 10 j 21:39	0°♄			-5141 Dec 16 j 04:44	0°♄		
	-5145 Mar 31 j 04:20	0°♄			-5140 Jan 23 j 20:30	0°♄		
	-5145 May 17 j 19:42	0°♄			-5140 Mar 03 j 17:47	0°♄		
evening set	-5145 May 18 j 11:20	0°♄24'52			-5140 Apr 14 j 17:57	0°♄		
max. Earth dist.	-5145 Jun 17 j 11:58	19°♄42'10	2.63844 AU		-5140 May 29 j 23:37	0°♄		
	-5145 Jul 03 j 06:41	0°♄			-5140 Jul 20 j 06:16	0°♄		
				asc. node	-5140 Sep 25 j 23:18	24°♄45'25		
conjunction	-5145 Jul 04 j 07:38	0°♄40'57	1°06'22	retrograde	-5140 Oct 05 j 03:16	25°♄16'26		
minimum elong	-5145 Jul 04 j 06:41	0°♄39'23	1°06'36	opposition	-5140 Nov 14 j 00:40	15°♄34'37	1°48'00	
	-5145 Aug 17 j 03:12	0°♄		greatest brilliancy	-5140 Nov 13 j 23:16	15°♄36'01	-1.3m	
morning rise	-5145 Aug 19 j 13:04	1°♄38'47		min. Earth dist.	-5140 Nov 13 j 22:28	15°♄36'50	0.66993 AU	
	-5145 Sep 29 j 06:40	0°♄		direct	-5140 Dec 24 j 10:45	5°♄47'56		
	-5145 Nov 09 j 22:06	0°♄			-5139 Mar 11 j 06:56	0°♄		
	-5145 Dec 20 j 11:29	0°♄			-5139 May 03 j 11:29	0°♄		
	-5144 Jan 29 j 14:53	0°♄			-5139 Jun 18 j 20:51	0°♄		
desc. node	-5144 Feb 02 j 09:09	2°♄48'08			-5139 Jul 31 j 11:35	0°♄		
	-5144 Mar 10 j 09:58	0°♄			-5139 Sep 09 j 14:17	0°♄		
	-5144 Apr 23 j 00:37	0°♄		desc. node	-5139 Sep 24 j 00:13	11°♄06'09		
	-5144 Jun 17 j 02:00	0°♄		evening set	-5139 Oct 05 j 23:19	20°♄24'26		
retrograde	-5144 Jul 23 j 10:48	8°♄03'24			-5139 Oct 18 j 05:16	0°♄		
min. Earth dist.	-5144 Aug 23 j 12:57	1°♄28'05	0.53108 AU		-5139 Nov 25 j 08:04	0°♄		
	-5144 Aug 27 j 10:29	30°♄						
greatest brilliancy	-5144 Aug 29 j 07:32	29°♄17'05	-1.9m	conjunction	-5139 Dec 09 j 09:56	11°♄02'00	0°-50'-11	
opposition	-5144 Aug 30 j 18:56	28°♄43'26	-4°-30'-59	minimum elong	-5139 Dec 09 j 06:35	10°♄55'29	0°50'20	
direct	-5144 Oct 04 j 20:13	20°♄59'19			-5138 Jan 02 j 20:57	0°♄		
	-5144 Nov 15 j 11:45	0°♄		max. Earth dist.	-5138 Jan 22 j 18:33	15°♄09'30	2.40041 AU	
asc. node	-5144 Dec 21 j 18:53	16°♄20'22			-5138 Feb 11 j 15:50	0°♄		
	-5143 Jan 16 j 14:13	0°♄		morning rise	-5138 Feb 14 j 04:43	1°♄52'08		
	-5143 Mar 09 j 18:15	0°♄			-5138 Mar 25 j 09:06	0°♄		
	-5143 Apr 27 j 22:38	0°♄			-5138 May 08 j 12:50	0°♄		
	-5143 Jun 13 j 20:29	0°♄			-5138 Jun 24 j 17:20	0°♄		
evening set	-5143 Jun 25 j 23:47	8°♄00'25		asc. node	-5138 Aug 13 j 23:31	28°♄58'11		
max. Earth dist.	-5143 Jul 14 j 18:44	20°♄37'21	2.55606 AU		-5138 Aug 15 j 22:06	0°♄		
	-5143 Jul 28 j 11:43	0°♄		retrograde	-5138 Nov 09 j 22:06	29°♄09'08		
				opposition	-5138 Dec 18 j 17:29	20°♄07'52	4°06'13	
conjunction	-5143 Aug 13 j 20:44	11°♄24'02	1°07'28	greatest brilliancy	-5138 Dec 19 j 08:03	19°♄53'36	-1.3m	
minimum elong	-5143 Aug 13 j 21:46	11°♄25'50	1°07'45	min. Earth dist.	-5138 Dec 22 j 10:18	18°♄40'44	0.64803 AU	
	-5143 Sep 08 j 22:33	0°♄		direct	-5137 Jan 28 j 21:49	10°♄06'55		
morning rise	-5143 Oct 03 j 22:58	18°♄20'13			-5137 Apr 05 j 03:59	0°♄		
	-5143 Oct 19 j 13:40	0°♄			-5137 May 27 j 05:45	0°♄		
	-5143 Nov 27 j 22:37	0°♄			-5137 Jul 10 j 11:36	0°♄		
desc. node	-5143 Dec 20 j 06:47	17°♄14'36		desc. node	-5137 Aug 11 j 22:13	23°♄46'22		
	-5142 Jan 05 j 18:53	0°♄			-5137 Aug 20 j 04:16	0°♄		
	-5142 Feb 13 j 23:03	0°♄			-5137 Sep 28 j 01:16	0°♄		
	-5142 Mar 26 j 12:32	0°♄			-5137 Nov 05 j 08:27	0°♄		
	-5142 May 09 j 00:59	0°♄		evening set	-5137 Dec 13 j 05:34	29°♄20'08		
	-5142 Jun 28 j 12:06	0°♄			-5137 Dec 14 j 02:26	0°♄		
retrograde	-5142 Sep 01 j 01:55	20°♄11'15			-5136 Jan 23 j 03:15	0°♄		
min. Earth dist.	-5142 Oct 07 j 03:26	11°♄45'50	0.62904 AU					
opposition	-5142 Oct 10 j 22:59	10°♄14'02	-1°-8'-44	conjunction	-5136 Feb 12 j 16:48	14°♄54'20	-1°-4'-35	
greatest brilliancy	-5142 Oct 10 j 17:50	10°♄19'12	-1.5m	minimum elong	-5136 Feb 12 j 18:22	14°♄57'09	1°04'52	
asc. node	-5142 Nov 08 j 20:38	1°♄45'32			-5136 Mar 05 j 01:02	0°♄		
direct	-5142 Nov 18 j 07:23	1°♄10'23		max. Earth dist.	-5136 Mar 21 j 06:09	11°♄13'08	2.52824 AU	
	-5141 Feb 12 j 16:12	0°♄		morning rise	-5136 Apr 09 j 19:17	24°♄28'18		

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 27

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5136 Apr 18 j 01:54	0°♄			-5131 Jun 15 j 19:40	30°♄	
	-5136 Jun 03 j 05:43	0°♅		direct	-5131 Jul 04 j 19:38	27°♄44'20	
asc. node	-5136 Jun 30 j 21:06	17°♅20'21			-5131 Jul 23 j 19:51	0°♄	
	-5136 Jul 21 j 13:40	0°♄			-5131 Sep 28 j 05:23	0°♄	
	-5136 Sep 11 j 06:31	0°♄			-5131 Nov 16 j 06:42	0°♄	
	-5136 Nov 14 j 19:11	0°♄			-5130 Jan 02 j 12:08	0°♄	
retrograde	-5136 Dec 20 j 21:28	6°♄42'30			-5130 Feb 18 j 19:06	0°♄	
	-5135 Jan 23 j 03:24	30°♄		asc. node	-5130 Feb 20 j 10:37	1°♄02'27	
opposition	-5135 Jan 26 j 08:51	28°♄49'16	5°21'41		-5130 Apr 07 j 08:31	0°♅	
greatest brilliancy	-5135 Jan 28 j 02:54	28°♄10'15	-1.7m	evening set	-5130 May 03 j 13:07	16°♅33'10	
min. Earth dist.	-5135 Feb 02 j 14:51	26°♄08'10	0.56387 AU		-5130 May 24 j 16:40	0°♄	
direct	-5135 Mar 07 j 10:29	19°♄19'52		max. Earth dist.	-5130 Jun 07 j 17:02	8°♄58'23	2.65712 AU
	-5135 Apr 20 j 12:20	0°♄					
	-5135 Jun 13 j 15:05	0°♄		conjunction	-5130 Jun 19 j 10:06	16°♄31'07	0°57'35
desc. node	-5135 Jun 28 j 21:13	10°♄08'43		minimum elong	-5130 Jun 19 j 08:51	16°♄29'05	0°57'45
	-5135 Jul 26 j 23:30	0°♄			-5130 Jul 10 j 03:36	0°♄	
	-5135 Sep 05 j 01:58	0°♄		morning rise	-5130 Aug 04 j 00:14	16°♄24'51	
	-5135 Oct 14 j 04:56	0°♄			-5130 Aug 24 j 06:00	0°♄	
	-5135 Nov 22 j 16:10	0°♄			-5130 Oct 06 j 20:45	0°♄	
	-5134 Jan 02 j 09:15	0°♄			-5130 Nov 18 j 04:17	0°♄	
evening set	-5134 Feb 08 j 07:40	26°♄08'50			-5130 Dec 29 j 13:55	0°♄	
	-5134 Feb 13 j 21:17	0°♄			-5129 Feb 08 j 19:00	0°♄	
	-5134 Mar 30 j 07:09	0°♄		desc. node	-5129 Feb 19 j 01:32	7°♄23'47	
					-5129 Mar 23 j 07:19	0°♄	
conjunction	-5134 Apr 02 j 16:19	2°♄14'10	0°-25'-52		-5129 May 10 j 17:51	0°♄	
minimum elong	-5134 Apr 02 j 17:27	2°♄16'03	0°26'01	retrograde	-5129 Jul 06 j 01:49	17°♄45'43	
max. Earth dist.	-5134 Apr 21 j 00:34	14°♄16'00	2.62402 AU	min. Earth dist.	-5129 Aug 03 j 23:43	12°♄03'41	0.48184 AU
	-5134 May 15 j 08:26	0°♅		greatest brilliancy	-5129 Aug 10 j 01:20	9°♄54'06	-2.2m
asc. node	-5134 May 18 j 18:06	2°♅11'03		opposition	-5129 Aug 12 j 01:25	9°♄10'58	-5°-41'-16
morning rise	-5134 May 22 j 09:45	4°♅31'27		direct	-5129 Sep 14 j 10:42	2°♄12'25	
	-5134 Jul 01 j 13:10	0°♄			-5129 Dec 05 j 01:20	0°♄	
	-5134 Aug 18 j 14:13	0°♄		asc. node	-5128 Jan 08 j 09:53	18°♄53'55	
	-5134 Oct 06 j 22:50	0°♄			-5128 Jan 27 j 14:17	0°♄	
	-5134 Nov 29 j 07:58	0°♄			-5128 Mar 17 j 17:22	0°♅	
retrograde	-5133 Feb 16 j 05:26	25°♄53'24			-5128 May 05 j 03:31	0°♄	
opposition	-5133 Mar 20 j 21:27	19°♄50'54	3°34'24	evening set	-5128 Jun 10 j 05:29	23°♄04'52	
greatest brilliancy	-5133 Mar 22 j 10:54	19°♄21'30	-2.4m		-5128 Jun 20 j 19:43	0°♄	
min. Earth dist.	-5133 Mar 28 j 18:50	17°♄23'31	0.43742 AU	max. Earth dist.	-5128 Jul 02 j 23:22	8°♄01'22	2.59409 AU
direct	-5133 Apr 25 j 06:51	12°♄36'45					
desc. node	-5133 May 16 j 22:39	15°♄39'59		conjunction	-5128 Jul 27 j 21:16	24°♄47'10	1°11'25
	-5133 Jun 20 j 06:55	0°♄		minimum elong	-5128 Jul 27 j 21:21	24°♄47'20	1°11'41
	-5133 Aug 07 j 15:53	0°♄			-5128 Aug 04 j 12:06	0°♄	
	-5133 Sep 19 j 06:31	0°♄		morning rise	-5128 Sep 14 j 09:40	28°♄43'36	
	-5133 Oct 30 j 23:36	0°♄			-5128 Sep 16 j 04:13	0°♄	
	-5133 Dec 12 j 09:02	0°♄			-5128 Oct 27 j 03:03	0°♄	
	-5132 Jan 25 j 03:52	0°♄			-5128 Dec 05 j 20:38	0°♄	
	-5132 Mar 10 j 11:12	0°♄		desc. node	-5127 Jan 06 j 01:25	23°♄52'23	
evening set	-5132 Mar 24 j 21:25	9°♄22'24			-5127 Jan 14 j 01:28	0°♄	
asc. node	-5132 Apr 04 j 13:49	16°♄16'30			-5127 Feb 22 j 15:05	0°♄	
	-5132 Apr 25 j 22:46	0°♅			-5127 Apr 04 j 19:26	0°♄	
					-5127 May 19 j 22:40	0°♄	
conjunction	-5132 May 12 j 13:36	10°♅37'28	0°21'06		-5127 Jul 19 j 01:08	0°♄	
minimum elong	-5132 May 12 j 12:49	10°♅36'14	0°21'08	retrograde	-5127 Aug 17 j 14:49	5°♄16'29	
max. Earth dist.	-5132 May 14 j 20:27	12°♅04'59	2.66762 AU		-5127 Sep 14 j 04:54	30°♄	
	-5132 Jun 11 j 22:19	0°♄		min. Earth dist.	-5127 Sep 20 j 21:27	27°♄28'45	0.59691 AU
morning rise	-5132 Jun 27 j 17:43	10°♄06'05		greatest brilliancy	-5127 Sep 25 j 12:28	25°♄38'42	-1.6m
	-5132 Jul 28 j 17:47	0°♄		opposition	-5127 Sep 26 j 03:02	25°♄24'15	-2°-25'-50
	-5132 Sep 13 j 00:30	0°♄		direct	-5127 Nov 02 j 07:50	16°♄46'17	
	-5132 Oct 28 j 20:13	0°♄		asc. node	-5127 Nov 25 j 10:36	19°♄47'39	
	-5132 Dec 13 j 18:18	0°♄			-5127 Dec 25 j 07:25	0°♄	
	-5131 Jan 30 j 06:31	0°♄			-5126 Feb 23 j 02:59	0°♅	
	-5131 Mar 28 j 07:25	0°♄			-5126 Apr 15 j 09:30	0°♄	
desc. node	-5131 Apr 03 j 01:14	2°♄08'48			-5126 Jun 02 j 01:00	0°♄	
retrograde	-5131 May 04 j 18:12	8°♄11'16			-5126 Jul 16 j 20:05	0°♄	
min. Earth dist.	-5131 Jun 01 j 21:50	3°♄35'38	0.38090 AU	evening set	-5126 Jul 22 j 12:27	3°♄56'09	
opposition	-5131 Jun 04 j 22:38	2°♄46'14	-4°-29'-11	max. Earth dist.	-5126 Aug 06 j 20:22	14°♄41'59	2.48592 AU
greatest brilliancy	-5131 Jun 04 j 05:35	2°♄57'49	-2.8m		-5126 Aug 28 j 03:20	0°♄	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 28

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

conjunction	-5126 Sep 12 j 14:18	11°♏21'03	0°47'01	asc. node	-5121 Jul 18 j 13:45	22°♑41'26	
minimum elong	-5126 Sep 12 j 16:24	11°♏24'58	0°47'13		-5121 Jul 30 j 21:53	0°♌	
	-5126 Oct 07 j 10:55	0°♎			-5121 Sep 24 j 02:19	0°♐	
morning rise	-5126 Nov 08 j 19:41	24°♎51'11		retrograde	-5121 Dec 04 j 09:26	21°♐28'10	
	-5126 Nov 15 j 10:45	0°♏		opposition	-5120 Jan 10 j 22:56	13°♐04'01	5°03'32
desc. node	-5126 Nov 23 j 22:39	6°♏36'53		greatest brilliancy	-5120 Jan 12 j 06:05	12°♐34'17	-1.5m
	-5126 Dec 23 j 21:45	0°♎		min. Earth dist.	-5120 Jan 16 j 21:29	10°♐47'58	0.60386 AU
	-5125 Jan 31 j 16:35	0°♌		direct	-5120 Feb 20 j 17:58	3°♐14'07	
	-5125 Mar 12 j 17:13	0°♍			-5120 May 07 j 23:14	0°♍	
	-5125 Apr 24 j 00:49	0°♎			-5120 Jun 24 j 13:25	0°♏	
	-5125 Jun 09 j 07:00	0°♌		desc. node	-5120 Jul 15 j 14:41	14°♏47'07	
	-5125 Aug 04 j 13:53	0°♑			-5120 Aug 05 j 09:11	0°♎	
retrograde	-5125 Sep 22 j 17:37	12°♑14'34			-5120 Sep 13 j 19:23	0°♏	
asc. node	-5125 Oct 13 j 12:24	9°♑18'50			-5120 Oct 22 j 11:29	0°♎	
min. Earth dist.	-5125 Oct 31 j 04:29	3°♑00'48	0.66122 AU		-5120 Nov 30 j 13:30	0°♌	
opposition	-5125 Nov 01 j 17:57	2°♑23'03	0°43'52		-5119 Jan 09 j 22:08	0°♍	
greatest brilliancy	-5125 Nov 01 j 16:02	2°♑24'59	-1.3m	evening set	-5119 Jan 18 j 13:32	6°♍15'39	
	-5125 Nov 07 j 18:01	30°♌			-5119 Feb 21 j 02:46	0°♎	
direct	-5125 Dec 11 j 11:48	22°♌49'49					
	-5124 Jan 18 j 01:17	0°♑		conjunction	-5119 Mar 15 j 17:46	15°♎31'26	0°-43'-32
	-5124 Mar 22 j 07:13	0°♌		minimum elong	-5119 Mar 15 j 19:36	15°♎34'32	0°43'45
	-5124 May 11 j 20:25	0°♐			-5119 Apr 06 j 07:33	0°♌	
	-5124 Jun 26 j 12:33	0°♍		max. Earth dist.	-5119 Apr 10 j 04:00	2°♌33'17	2.59252 AU
	-5124 Aug 07 j 22:29	0°♏		morning rise	-5119 May 06 j 19:31	20°♌00'09	
evening set	-5124 Sep 11 j 14:03	25°♏50'32			-5119 May 22 j 07:50	0°♑	
	-5124 Sep 17 j 00:56	0°♎		asc. node	-5119 Jun 04 j 10:12	8°♑21'46	
desc. node	-5124 Oct 10 j 18:11	18°♎18'50			-5119 Jul 08 j 19:21	0°♌	
	-5124 Oct 25 j 17:04	0°♏			-5119 Aug 26 j 18:57	0°♐	
max. Earth dist.	-5124 Nov 03 j 02:41	6°♏35'45	2.37793 AU		-5119 Oct 17 j 19:18	0°♍	
					-5119 Dec 23 j 13:56	0°♏	
conjunction	-5124 Nov 11 j 20:42	13°♏28'38	0°-23'-8	retrograde	-5118 Jan 22 j 06:06	4°♏44'39	
minimum elong	-5124 Nov 11 j 18:41	13°♏24'40	0°23'10		-5118 Feb 19 j 03:50	30°♌	
	-5124 Dec 02 j 20:49	0°♎		opposition	-5118 Feb 25 j 13:08	27°♍53'25	4°54'49
	-5123 Jan 10 j 09:53	0°♌		greatest brilliancy	-5118 Feb 27 j 14:27	27°♍11'04	-2.1m
morning rise	-5123 Jan 18 j 08:04	6°♌04'17		min. Earth dist.	-5118 Mar 05 j 23:22	25°♍01'01	0.48820 AU
	-5123 Feb 19 j 04:20	0°♍		direct	-5118 Apr 04 j 07:46	19°♍29'39	
	-5123 Apr 01 j 21:52	0°♎			-5118 May 16 j 19:40	0°♏	
	-5123 May 16 j 06:48	0°♌		desc. node	-5118 Jun 02 j 14:32	8°♏16'41	
	-5123 Jul 03 j 08:49	0°♑			-5118 Jul 08 j 07:25	0°♎	
	-5123 Aug 28 j 14:58	0°♌			-5118 Aug 20 j 01:33	0°♏	
asc. node	-5123 Aug 30 j 14:19	0°♌53'14			-5118 Sep 29 j 14:20	0°♎	
retrograde	-5123 Oct 26 j 15:23	16°♌01'18			-5118 Nov 09 j 01:43	0°♌	
opposition	-5123 Dec 04 j 23:56	6°♌41'25	3°17'59		-5118 Dec 20 j 14:06	0°♍	
greatest brilliancy	-5123 Dec 05 j 06:08	6°♌35'16	-1.3m		-5117 Feb 01 j 17:20	0°♎	
min. Earth dist.	-5123 Dec 07 j 04:55	5°♌48'48	0.66414 AU	evening set	-5117 Mar 09 j 05:29	23°♎49'49	
	-5123 Dec 23 j 12:19	30°♌			-5117 Mar 18 j 13:59	0°♌	
direct	-5122 Jan 15 j 01:13	26°♑42'06		asc. node	-5117 Apr 22 j 06:26	22°♌33'58	
	-5122 Feb 08 j 08:50	0°♌					
	-5122 Apr 17 j 13:58	0°♐		conjunction	-5117 Apr 28 j 07:58	26°♌28'16	0°03'29
	-5122 Jun 05 j 08:38	0°♍		minimum elong	-5117 Apr 28 j 07:48	26°♌28'00	0°03'27
	-5122 Jul 18 j 17:31	0°♏		behind sun begin	-5117 Apr 27 j 12:04	25°♌56'16	
desc. node	-5122 Aug 28 j 15:15	0°♎24'22		behind sun end	-5117 Apr 29 j 03:33	26°♌59'44	
	-5122 Aug 28 j 02:28	0°♎			-5117 May 03 j 19:48	0°♑	
	-5122 Oct 05 j 19:45	0°♏		max. Earth dist.	-5117 May 06 j 16:16	1°♑49'49	2.65710 AU
greatest brilliancy	-5122 Oct 28 j 14:36	17°♏54'18	1.2m	morning rise	-5117 Jun 14 j 12:01	26°♑37'00	
	-5122 Nov 12 j 23:58	0°♎			-5117 Jun 19 j 19:36	0°♌	
evening set	-5122 Nov 16 j 18:25	2°♎57'13			-5117 Aug 05 j 23:24	0°♐	
	-5122 Dec 21 j 14:50	0°♌			-5117 Sep 22 j 02:22	0°♍	
					-5117 Nov 08 j 15:11	0°♏	
conjunction	-5121 Jan 20 j 02:10	22°♌17'08	-1°-8'-38		-5117 Dec 28 j 04:39	0°♎	
minimum elong	-5121 Jan 20 j 01:56	22°♌16'43	1°08'56		-5116 Feb 26 j 07:42	0°♏	
	-5121 Jan 30 j 12:11	0°♍		retrograde	-5116 Apr 03 j 08:21	7°♏35'31	
max. Earth dist.	-5121 Mar 06 j 00:45	24°♍54'08	2.47928 AU	desc. node	-5116 Apr 19 j 17:00	5°♏57'26	
	-5121 Mar 13 j 06:44	0°♎		opposition	-5116 May 03 j 22:23	2°♏31'11	-1°-5'-1
morning rise	-5121 Mar 22 j 05:06	6°♎13'04		greatest brilliancy	-5116 May 04 j 01:01	2°♏29'24	-2.9m
	-5121 Apr 26 j 06:41	0°♌		min. Earth dist.	-5116 May 06 j 08:20	1°♏52'01	0.38194 AU
	-5121 Jun 11 j 15:48	0°♑			-5116 May 13 j 14:38	30°♌	

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

direct	-5116 Jun 04 j 00:24	27° \mathbb{M} 10'56			-5111 Sep 04 j 07:11	0° Ω	
	-5116 Jun 24 j 21:59	0° $\underline{\Omega}$			-5111 Oct 14 j 19:37	0° \mathbb{M}	
	-5116 Aug 26 j 21:17	0° \mathbb{M}		morning rise	-5111 Oct 16 j 02:12	0° \mathbb{M} 57'43	
	-5116 Oct 12 j 15:41	0° \mathbb{M}			-5111 Nov 23 j 01:09	0° $\underline{\Omega}$	
	-5116 Nov 26 j 16:11	0° \mathbb{Z}		desc. node	-5111 Dec 10 j 16:30	13° $\underline{\Omega}$ 40'00	
	-5115 Jan 11 j 01:10	0° \approx			-5111 Dec 31 j 17:31	0° \mathbb{M}	
	-5115 Feb 26 j 08:16	0° \mathbb{H}			-5110 Feb 08 j 17:25	0° \mathbb{M}	
asc. node	-5115 Mar 09 j 02:33	6° \mathbb{H} 53'43			-5110 Mar 21 j 00:36	0° \mathbb{Z}	
	-5115 Apr 14 j 08:57	0° \mathbb{Y}			-5110 May 02 j 22:24	0° \approx	
evening set	-5115 Apr 18 j 12:13	2° \mathbb{Y} 37'41			-5110 Jun 20 j 04:02	0° \mathbb{H}	
max. Earth dist.	-5115 May 29 j 08:17	28° \mathbb{Y} 37'06	2.66779 AU	retrograde	-5110 Sep 09 j 02:42	28° \mathbb{H} 42'04	
	-5115 May 31 j 12:11	0° \mathbb{Z}		min. Earth dist.	-5110 Oct 16 j 01:34	19° \mathbb{H} 58'08	0.64300 AU
				opposition	-5110 Oct 19 j 01:54	18° \mathbb{H} 45'20	0°-25'-58
conjunction	-5115 Jun 04 j 18:40	2° \mathbb{Z} 43'48	0°45'27	greatest brilliancy	-5110 Oct 19 j 00:20	18° \mathbb{H} 46'55	-1.4m
minimum elong	-5115 Jun 04 j 17:23	2° \mathbb{Z} 41'45	0°45'34	asc. node	-5110 Oct 30 j 03:20	14° \mathbb{H} 31'55	
	-5115 Jul 17 j 01:05	0° \mathbb{H}		direct	-5110 Nov 26 j 22:56	9° \mathbb{H} 29'57	
morning rise	-5115 Jul 20 j 05:27	2° \mathbb{H} 04'30			-5109 Feb 04 j 15:04	0° \mathbb{Y}	
	-5115 Aug 31 j 12:07	0° \mathbb{Z}			-5109 Apr 01 j 16:05	0° \mathbb{Z}	
	-5115 Oct 14 j 18:44	0° Ω			-5109 May 20 j 17:07	0° \mathbb{H}	
	-5115 Nov 27 j 01:30	0° \mathbb{M}			-5109 Jul 04 j 22:31	0° \mathbb{Z}	
	-5114 Jan 08 j 19:05	0° $\underline{\Omega}$			-5109 Aug 16 j 06:26	0° Ω	
	-5114 Feb 20 j 23:53	0° \mathbb{M}		evening set	-5109 Aug 21 j 15:39	3° Ω 56'32	
desc. node	-5114 Mar 07 j 20:10	9° \mathbb{M} 57'46		max. Earth dist.	-5109 Sep 12 j 04:58	19° Ω 58'54	2.41080 AU
	-5114 Apr 08 j 20:30	0° \mathbb{M}			-5109 Sep 25 j 10:04	0° \mathbb{M}	
retrograde	-5114 Jun 14 j 21:34	23° \mathbb{Z} 51'47					
min. Earth dist.	-5114 Jul 12 j 01:04	18° \mathbb{Z} 59'40	0.43237 AU	conjunction	-5109 Oct 17 j 22:53	17° \mathbb{M} 21'03	0°07'44
greatest brilliancy	-5114 Jul 17 j 17:17	17° \mathbb{Z} 09'12	-2.5m	minimum elong	-5109 Oct 17 j 23:29	17° \mathbb{M} 22'15	0°07'49
opposition	-5114 Jul 19 j 21:00	16° \mathbb{Z} 26'54	-6°-20'-15	behind sun begin	-5109 Oct 17 j 00:27	16° \mathbb{M} 37'35	
direct	-5114 Aug 20 j 10:20	10° \mathbb{Z} 21'29		behind sun end	-5109 Oct 18 j 22:32	18° \mathbb{M} 06'57	
	-5114 Oct 23 j 22:16	0° \mathbb{Z}		desc. node	-5109 Oct 28 j 13:11	25° \mathbb{M} 35'52	
	-5114 Dec 17 j 10:01	0° \approx			-5109 Nov 03 j 04:24	0° $\underline{\Omega}$	
asc. node	-5113 Jan 25 j 00:12	23° \approx 03'31			-5109 Dec 11 j 09:56	0° \mathbb{M}	
	-5113 Feb 05 j 10:28	0° \mathbb{H}		morning rise	-5109 Dec 21 j 16:40	8° \mathbb{M} 02'55	
	-5113 Mar 26 j 06:24	0° \mathbb{Y}			-5108 Jan 18 j 23:57	0° \mathbb{M}	
	-5113 May 13 j 03:44	0° \mathbb{Z}			-5108 Feb 27 j 19:06	0° \mathbb{Z}	
evening set	-5113 May 27 j 01:38	8° \mathbb{Z} 51'45			-5108 Apr 09 j 15:04	0° \approx	
max. Earth dist.	-5113 Jun 23 j 08:42	26° \mathbb{Z} 30'32	2.62478 AU		-5108 May 24 j 10:02	0° \mathbb{H}	
	-5113 Jun 28 j 16:38	0° \mathbb{H}			-5108 Jul 13 j 01:47	0° \mathbb{Y}	
				asc. node	-5108 Sep 16 j 05:27	29° \mathbb{Y} 08'00	
conjunction	-5113 Jul 13 j 01:32	9° \mathbb{H} 29'27	1°09'36		-5108 Sep 19 j 12:23	0° \mathbb{Z}	
minimum elong	-5113 Jul 13 j 00:53	9° \mathbb{H} 28'24	1°09'51	retrograde	-5108 Oct 12 j 22:23	3° \mathbb{Z} 07'13	
	-5113 Aug 12 j 11:45	0° \mathbb{Z}			-5108 Nov 03 j 15:35	30° \mathbb{R} \mathbb{Y}	
morning rise	-5113 Aug 28 j 21:19	11° \mathbb{Z} 18'10		opposition	-5108 Nov 21 j 15:53	23° \mathbb{Y} 32'15	2°22'52
	-5113 Sep 24 j 11:12	0° Ω		greatest brilliancy	-5108 Nov 21 j 16:20	23° \mathbb{Y} 31'48	-1.3m
	-5113 Nov 04 j 20:24	0° \mathbb{M}		min. Earth dist.	-5108 Nov 22 j 09:13	23° \mathbb{Y} 14'54	0.67050 AU
	-5113 Dec 15 j 02:09	0° $\underline{\Omega}$		direct	-5107 Jan 01 j 08:15	13° \mathbb{Y} 39'53	
desc. node	-5112 Jan 23 j 19:20	29° $\underline{\Omega}$ 58'46			-5107 Mar 02 j 13:24	0° \mathbb{Z}	
	-5112 Jan 23 j 20:00	0° \mathbb{M}			-5107 Apr 27 j 14:41	0° \mathbb{H}	
	-5112 Mar 04 j 01:27	0° \mathbb{M}			-5107 Jun 13 j 17:02	0° \mathbb{Z}	
	-5112 Apr 15 j 10:08	0° \mathbb{Z}			-5107 Jul 26 j 13:54	0° Ω	
	-5112 Jun 03 j 09:19	0° \approx			-5107 Sep 04 j 18:57	0° \mathbb{M}	
retrograde	-5112 Aug 02 j 00:46	18° \approx 46'22		desc. node	-5107 Sep 14 j 09:32	7° \mathbb{M} 22'23	
min. Earth dist.	-5112 Sep 03 j 07:12	11° \approx 43'17	0.55618 AU		-5107 Oct 13 j 10:55	0° $\underline{\Omega}$	
opposition	-5112 Sep 09 j 20:53	9° \approx 10'42	-3°-45'-57	evening set	-5107 Oct 20 j 17:39	5° $\underline{\Omega}$ 43'13	
greatest brilliancy	-5112 Sep 08 j 17:29	9° \approx 37'17	-1.8m		-5107 Nov 20 j 14:02	0° \mathbb{M}	
direct	-5112 Oct 15 j 17:23	1° \approx 05'20					
asc. node	-5112 Dec 12 j 00:41	16° \approx 24'10		conjunction	-5107 Dec 24 j 21:31	26° \mathbb{M} 44'39	-1°00'-43
	-5111 Jan 09 j 03:57	0° \mathbb{H}		minimum elong	-5107 Dec 24 j 18:50	26° \mathbb{M} 39'27	1°00'56
	-5111 Mar 04 j 04:45	0° \mathbb{Y}			-5107 Dec 29 j 03:03	0° \mathbb{M}	
	-5111 Apr 23 j 00:22	0° \mathbb{Z}			-5106 Feb 06 j 21:58	0° \mathbb{Z}	
	-5111 Jun 09 j 04:24	0° \mathbb{H}		max. Earth dist.	-5106 Feb 11 j 12:31	3° \mathbb{Z} 23'28	2.42730 AU
evening set	-5111 Jul 05 j 08:00	17° \mathbb{H} 21'03		morning rise	-5106 Feb 28 j 00:26	15° \mathbb{Z} 22'55	
max. Earth dist.	-5111 Jul 22 j 09:59	28° \mathbb{H} 59'09	2.53249 AU		-5106 Mar 20 j 14:22	0° \approx	
	-5111 Jul 23 j 21:20	0° \mathbb{Z}			-5106 May 03 j 15:07	0° \mathbb{H}	
					-5106 Jun 19 j 09:41	0° \mathbb{Y}	
conjunction	-5111 Aug 24 j 03:11	21° \mathbb{Z} 57'15	1°02'11	asc. node	-5106 Aug 04 j 05:25	27° \mathbb{Y} 13'53	
minimum elong	-5111 Aug 24 j 04:43	21° \mathbb{Z} 59'59	1°02'26		-5106 Aug 09 j 04:01	0° \mathbb{Z}	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 30

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5106 Oct 11 j 16:06	0°II			-5101 May 26 j 18:14	0°ྐ		
retrograde	-5106 Nov 18 j 11:55	7°II19'20			-5101 Jul 29 j 00:44	0°𐌵		
	-5106 Dec 23 j 00:11	30°R𐌵			-5101 Sep 12 j 00:54	0°𐌮		
opposition	-5106 Dec 26 j 21:48	28°𐌵29'59	4°30'15		-5101 Oct 24 j 20:14	0°𐌶		
greatest brilliancy	-5106 Dec 27 j 17:57	28°𐌵10'20	-1.4m		-5101 Dec 06 j 21:32	0°𐌶		
min. Earth dist.	-5106 Dec 31 j 10:00	26°𐌵44'34	0.63488 AU		-5100 Jan 20 j 02:24	0°≈		
direct	-5105 Feb 06 j 00:39	18°𐌵30'36			-5100 Mar 05 j 16:17	0°𐌶		
	-5105 Mar 25 j 15:43	0°II		asc. node	-5100 Mar 25 j 18:32	12°𐌶59'21		
	-5105 May 20 j 20:14	0°𐌶		evening set	-5100 Apr 03 j 01:22	18°𐌶18'50		
	-5105 Jul 04 j 23:14	0°𐌵			-5100 Apr 21 j 07:23	0°𐌶		
desc. node	-5105 Aug 02 j 07:28	20°𐌵30'58		max. Earth dist.	-5100 May 20 j 06:13	18°𐌶28'18	2.67002 AU	
	-5105 Aug 14 j 23:42	0°ྐ						
	-5105 Sep 23 j 00:37	0°𐌵		conjunction	-5100 May 21 j 02:54	19°𐌶01'16	0°30'40	
	-5105 Oct 31 j 10:12	0°𐌮		minimum elong	-5100 May 21 j 01:52	18°𐌶59'37	0°30'45	
	-5105 Dec 09 j 06:12	0°𐌶			-5100 Jun 07 j 07:45	0°𐌵		
evening set	-5105 Dec 27 j 10:47	13°𐌶45'16		morning rise	-5100 Jul 05 j 21:41	18°𐌵18'50		
	-5104 Jan 18 j 08:59	0°𐌶			-5100 Jul 24 j 00:29	0°II		
					-5100 Sep 07 j 23:10	0°𐌶		
conjunction	-5104 Feb 24 j 23:11	26°𐌶56'27	0°-58'-25		-5100 Oct 23 j 03:18	0°𐌵		
minimum elong	-5104 Feb 25 j 01:09	26°𐌶59'54	0°58'40		-5100 Dec 06 j 20:42	0°ྐ		
	-5104 Feb 29 j 08:09	0°≈			-5099 Jan 20 j 22:54	0°𐌵		
max. Earth dist.	-5104 Mar 29 j 00:26	19°≈41'31	2.55320 AU		-5099 Mar 10 j 01:23	0°𐌮		
	-5104 Apr 13 j 09:21	0°𐌶		desc. node	-5099 Mar 24 j 11:56	7°𐌮57'13		
morning rise	-5104 Apr 20 j 01:15	4°𐌶25'14		retrograde	-5099 May 20 j 20:37	25°𐌮48'11		
	-5104 May 29 j 10:25	0°𐌶		min. Earth dist.	-5099 Jun 16 j 20:37	21°𐌮19'55	0.39338 AU	
asc. node	-5104 Jun 21 j 03:09	14°𐌶21'29		greatest brilliancy	-5099 Jun 20 j 20:32	20°𐌮10'53	-2.7m	
	-5104 Jul 16 j 08:44	0°𐌵		opposition	-5099 Jun 22 j 06:53	19°𐌮45'58	-5°-42'-48	
	-5104 Sep 04 j 19:07	0°II		direct	-5099 Jul 22 j 12:44	14°𐌮28'57		
	-5104 Nov 01 j 03:11	0°𐌶			-5099 Sep 15 j 09:07	0°𐌶		
retrograde	-5104 Dec 31 j 19:11	16°𐌶29'57			-5099 Nov 08 j 17:31	0°𐌶		
opposition	-5103 Feb 05 j 13:09	8°𐌶56'24	5°21'29		-5099 Dec 27 j 14:13	0°≈		
greatest brilliancy	-5103 Feb 07 j 11:52	8°𐌶13'56	-1.8m	asc. node	-5098 Feb 10 j 16:20	28°≈09'19		
min. Earth dist.	-5103 Feb 13 j 08:56	6°𐌶06'23	0.53862 AU		-5098 Feb 13 j 15:09	0°𐌶		
	-5103 Mar 10 j 20:53	30°RII			-5098 Apr 02 j 13:26	0°𐌶		
direct	-5103 Mar 16 j 23:31	29°II44'32		evening set	-5098 May 12 j 02:56	24°𐌶56'47		
	-5103 Mar 23 j 04:17	0°𐌶			-5098 May 20 j 01:39	0°𐌵		
	-5103 Jun 05 j 13:03	0°𐌵		max. Earth dist.	-5098 Jun 13 j 08:24	15°𐌵33'51	2.64787 AU	
desc. node	-5103 Jun 19 j 08:31	8°𐌵40'51						
	-5103 Jul 20 j 13:49	0°ྐ		conjunction	-5098 Jun 27 j 22:19	25°𐌵01'09	1°03'07	
	-5103 Aug 30 j 07:42	0°𐌵		minimum elong	-5098 Jun 27 j 21:12	24°𐌵59'20	1°03'20	
	-5103 Oct 08 j 19:13	0°𐌮			-5098 Jul 05 j 13:18	0°II		
	-5103 Nov 17 j 12:32	0°𐌶		morning rise	-5098 Aug 12 j 18:52	25°II25'20		
	-5103 Dec 28 j 10:37	0°𐌶			-5098 Aug 19 j 13:07	0°𐌶		
	-5102 Feb 09 j 02:27	0°≈			-5098 Oct 01 j 22:19	0°𐌵		
evening set	-5102 Feb 19 j 07:27	6°≈59'09			-5098 Nov 12 j 21:01	0°ྐ		
	-5102 Mar 25 j 15:05	0°𐌶			-5098 Dec 23 j 19:03	0°𐌵		
					-5097 Feb 02 j 08:05	0°𐌮		
conjunction	-5102 Apr 12 j 08:18	11°𐌶38'15	0°-15'-5	desc. node	-5097 Feb 09 j 12:55	5°𐌮18'04		
minimum elong	-5102 Apr 12 j 08:57	11°𐌶39'19	0°15'12		-5097 Mar 15 j 16:52	0°𐌶		
behind sun begin	-5102 Apr 12 j 03:33	11°𐌶30'30			-5097 Apr 29 j 15:18	0°𐌶		
behind sun end	-5102 Apr 12 j 14:22	11°𐌶48'08			-5097 Jul 13 j 01:41	0°≈		
max. Earth dist.	-5102 Apr 26 j 22:33	21°𐌶07'16	2.63824 AU	retrograde	-5097 Jul 16 j 20:50	0°≈06'09		
asc. node	-5102 May 08 j 22:43	28°𐌶52'02			-5097 Jul 20 j 14:58	30°R𐌶		
	-5102 May 10 j 17:00	0°𐌶		min. Earth dist.	-5097 Aug 15 j 23:11	23°𐌶53'57	0.50938 AU	
morning rise	-5102 May 30 j 23:53	12°𐌶58'58		greatest brilliancy	-5097 Aug 21 j 22:04	21°𐌶41'55	-2.0m	
	-5102 Jun 26 j 19:05	0°𐌵		opposition	-5097 Aug 23 j 15:26	21°𐌶03'25	-5°-3'-17	
	-5102 Aug 13 j 10:50	0°II		direct	-5097 Sep 26 j 23:28	13°𐌶38'26		
	-5102 Sep 30 j 19:24	0°𐌶			-5097 Nov 24 j 21:38	0°≈		
	-5102 Nov 20 j 06:32	0°𐌵		asc. node	-5097 Dec 29 j 15:50	17°≈28'37		
	-5101 Jan 19 j 02:02	0°ྐ			-5096 Jan 21 j 06:44	0°𐌶		
retrograde	-5101 Mar 04 j 06:47	9°ྐ57'05			-5096 Mar 12 j 11:34	0°𐌶		
opposition	-5101 Apr 04 j 22:04	4°ྐ21'22	2°14'38		-5096 Apr 30 j 08:04	0°𐌵		
greatest brilliancy	-5101 Apr 05 j 20:15	4°ྐ05'00	-2.6m		-5096 Jun 16 j 04:20	0°II		
min. Earth dist.	-5101 Apr 11 j 15:03	2°ྐ23'05	0.41263 AU	evening set	-5096 Jun 19 j 04:13	1°II57'57		
	-5101 Apr 20 j 17:28	30°R𐌵		max. Earth dist.	-5096 Jul 09 j 17:20	15°II37'05	2.57393 AU	
desc. node	-5101 May 07 j 10:07	27°𐌵52'10			-5096 Jul 30 j 21:04	0°𐌶		
direct	-5101 May 08 j 18:55	27°𐌵51'25						

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 31

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

conjunction	-5096 Aug 06 j 10:15	4° \mathfrak{B} 31'13	1°09'55			-5091 Aug 20 j 00:26	0° \mathfrak{B}	
minimum elong	-5096 Aug 06 j 10:52	4° \mathfrak{B} 32'17	1°10'11	retrograde		-5091 Nov 03 j 18:41	23° \mathfrak{B} 56'50	
	-5096 Sep 11 j 11:21	0° \mathfrak{Q}		opposition		-5091 Dec 12 j 20:00	14° \mathfrak{B} 46'47	3°46'44
morning rise	-5096 Sep 25 j 05:39	9° \mathfrak{Q} 59'24		greatest brilliancy		-5091 Dec 13 j 06:34	14° \mathfrak{B} 36'21	-1.3m
	-5096 Oct 22 j 06:36	0° \mathfrak{M}		min. Earth dist.		-5091 Dec 15 j 20:34	13° \mathfrak{B} 35'06	0.65653 AU
	-5096 Nov 30 j 19:50	0° \mathfrak{A}		direct		-5090 Jan 22 j 23:09	4° \mathfrak{B} 45'52	
desc. node	-5096 Dec 27 j 11:08	20° \mathfrak{A} 29'04				-5090 Apr 10 j 03:10	0° \mathfrak{II}	
	-5095 Jan 08 j 19:43	0° \mathfrak{M}				-5090 May 30 j 15:49	0° \mathfrak{B}	
	-5095 Feb 17 j 03:04	0° \mathfrak{X}				-5090 Jul 13 j 13:31	0° \mathfrak{Q}	
	-5095 Mar 29 j 20:59	0° \mathfrak{B}		desc. node		-5090 Aug 19 j 02:16	26° \mathfrak{Q} 55'44	
	-5095 May 12 j 20:24	0° \mathfrak{A}				-5090 Aug 23 j 03:29	0° \mathfrak{M}	
	-5095 Jul 04 j 14:04	0° \mathfrak{X}				-5090 Sep 30 j 23:13	0° \mathfrak{A}	
retrograde	-5095 Aug 26 j 00:52	14° \mathfrak{X} 23'52				-5090 Nov 08 j 04:49	0° \mathfrak{M}	
min. Earth dist.	-5095 Sep 30 j 07:38	6° \mathfrak{X} 14'30	0.61566 AU	evening set		-5090 Dec 01 j 20:47	18° \mathfrak{M} 26'59	
opposition	-5095 Oct 04 j 18:30	4° \mathfrak{X} 27'39	-1°-40'-43			-5090 Dec 16 j 20:31	0° \mathfrak{X}	
greatest brilliancy	-5095 Oct 04 j 09:46	4° \mathfrak{X} 36'23	-1.5m			-5089 Jan 25 j 18:37	0° \mathfrak{B}	
	-5095 Oct 16 j 17:18	30° \mathfrak{R} \mathfrak{A}						
direct	-5095 Nov 11 j 14:36	25° \mathfrak{A} 34'51		conjunction		-5089 Feb 02 j 19:13	5° \mathfrak{B} 52'35	-1°-7'-30
asc. node	-5095 Nov 15 j 17:11	25° \mathfrak{A} 41'11		minimum elong		-5089 Feb 02 j 20:12	5° \mathfrak{B} 54'23	1°07'48
	-5095 Dec 10 j 03:33	0° \mathfrak{X}				-5089 Mar 08 j 13:28	0° \mathfrak{A}	
	-5094 Feb 16 j 12:51	0° \mathfrak{Y}		max. Earth dist.		-5089 Mar 15 j 20:56	5° \mathfrak{A} 05'51	2.50681 AU
	-5094 Apr 10 j 02:44	0° \mathfrak{B}		morning rise		-5089 Apr 02 j 15:56	17° \mathfrak{A} 19'06	
	-5094 May 28 j 05:01	0° \mathfrak{II}				-5089 Apr 21 j 12:23	0° \mathfrak{X}	
	-5094 Jul 12 j 03:43	0° \mathfrak{B}				-5089 Jun 06 j 16:46	0° \mathfrak{Y}	
evening set	-5094 Aug 01 j 22:58	14° \mathfrak{B} 32'09		asc. node		-5089 Jul 08 j 18:07	19° \mathfrak{Y} 58'24	
max. Earth dist.	-5094 Aug 17 j 17:15	25° \mathfrak{B} 49'10	2.45849 AU			-5089 Jul 25 j 07:51	0° \mathfrak{B}	
	-5094 Aug 23 j 11:28	0° \mathfrak{Q}				-5089 Sep 16 j 03:40	0° \mathfrak{II}	
						-5089 Dec 05 j 13:32	0° \mathfrak{B}	
conjunction	-5094 Sep 24 j 16:35	23° \mathfrak{Q} 54'14	0°34'44	retrograde		-5089 Dec 14 j 04:06	0° \mathfrak{B} 26'17	
minimum elong	-5094 Sep 24 j 18:35	23° \mathfrak{Q} 58'01	0°34'53			-5089 Dec 22 j 11:36	30° \mathfrak{R} \mathfrak{II}	
	-5094 Oct 02 j 17:41	0° \mathfrak{M}		opposition		-5088 Jan 20 j 03:21	22° \mathfrak{II} 18'22	5°15'51
	-5094 Nov 10 j 15:31	0° \mathfrak{A}		greatest brilliancy		-5088 Jan 21 j 16:39	21° \mathfrak{II} 43'13	-1.6m
desc. node	-5094 Nov 14 j 07:03	2° \mathfrak{A} 50'37		min. Earth dist.		-5088 Jan 26 j 19:26	19° \mathfrak{II} 47'47	0.58284 AU
morning rise	-5094 Nov 23 j 16:07	10° \mathfrak{A} 10'14		direct		-5088 Feb 29 j 13:29	12° \mathfrak{II} 38'11	
greatest brilliancy	-5094 Dec 11 j 03:35	23° \mathfrak{A} 50'52	1.2m			-5088 Apr 28 j 11:07	0° \mathfrak{B}	
	-5094 Dec 19 j 00:21	0° \mathfrak{M}				-5088 Jun 18 j 00:37	0° \mathfrak{Q}	
	-5093 Jan 26 j 16:52	0° \mathfrak{X}		desc. node		-5088 Jul 06 j 00:57	12° \mathfrak{Q} 18'21	
	-5093 Mar 07 j 14:34	0° \mathfrak{B}				-5088 Jul 30 j 15:44	0° \mathfrak{M}	
	-5093 Apr 18 j 15:56	0° \mathfrak{A}				-5088 Sep 08 j 10:44	0° \mathfrak{A}	
	-5093 Jun 03 j 04:20	0° \mathfrak{X}				-5088 Oct 17 j 08:20	0° \mathfrak{M}	
	-5093 Jul 25 j 20:21	0° \mathfrak{Y}				-5088 Nov 25 j 14:25	0° \mathfrak{X}	
retrograde	-5093 Sep 30 j 11:17	20° \mathfrak{Y} 11'58				-5087 Jan 05 j 02:32	0° \mathfrak{B}	
asc. node	-5093 Oct 03 j 19:42	20° \mathfrak{Y} 07'34		evening set		-5087 Jan 30 j 14:50	18° \mathfrak{B} 15'32	
opposition	-5093 Nov 09 j 10:04	10° \mathfrak{Y} 25'18	1°21'51			-5087 Feb 16 j 09:47	0° \mathfrak{A}	
greatest brilliancy	-5093 Nov 09 j 07:54	10° \mathfrak{Y} 27'29	-1.3m					
min. Earth dist.	-5093 Nov 08 j 15:56	10° \mathfrak{Y} 43'33	0.66725 AU	conjunction		-5087 Mar 26 j 04:16	25° \mathfrak{A} 40'45	0°-33'-32
direct	-5093 Dec 19 j 13:02	0° \mathfrak{Y} 44'11		minimum elong		-5087 Mar 26 j 05:44	25° \mathfrak{A} 43'12	0°33'42
	-5092 Mar 15 j 11:04	0° \mathfrak{B}				-5087 Apr 01 j 16:04	0° \mathfrak{X}	
	-5092 May 06 j 11:19	0° \mathfrak{II}		max. Earth dist.		-5087 Apr 16 j 13:11	9° \mathfrak{X} 49'10	2.61083 AU
	-5092 Jun 21 j 14:20	0° \mathfrak{B}		morning rise		-5087 May 15 j 21:01	28° \mathfrak{X} 51'30	
	-5092 Aug 03 j 04:16	0° \mathfrak{Q}				-5087 May 17 j 15:39	0° \mathfrak{Y}	
	-5092 Sep 12 j 07:37	0° \mathfrak{M}		asc. node		-5087 May 25 j 15:25	5° \mathfrak{Y} 07'13	
evening set	-5092 Sep 25 j 01:21	9° \mathfrak{M} 47'35				-5087 Jul 03 j 22:26	0° \mathfrak{B}	
desc. node	-5092 Oct 01 j 04:20	14° \mathfrak{M} 32'19				-5087 Aug 21 j 07:45	0° \mathfrak{II}	
	-5092 Oct 20 j 23:30	0° \mathfrak{A}				-5087 Oct 10 j 14:47	0° \mathfrak{B}	
						-5087 Dec 06 j 08:44	0° \mathfrak{Q}	
conjunction	-5092 Nov 27 j 08:02	29° \mathfrak{A} 23'41	0°-39'-30	retrograde		-5086 Feb 04 j 19:31	16° \mathfrak{Q} 41'18	
minimum elong	-5092 Nov 27 j 04:54	29° \mathfrak{A} 17'32	0°39'36	opposition		-5086 Mar 10 j 05:58	10° \mathfrak{Q} 16'25	4°16'54
	-5092 Nov 28 j 02:30	0° \mathfrak{M}		greatest brilliancy		-5086 Mar 12 j 02:53	9° \mathfrak{Q} 39'35	-2.3m
max. Earth dist.	-5092 Dec 28 j 12:45	23° \mathfrak{M} 45'44	2.38317 AU	min. Earth dist.		-5086 Mar 18 j 14:50	7° \mathfrak{Q} 33'12	0.45974 AU
	-5091 Jan 05 j 14:40	0° \mathfrak{X}		direct		-5086 Apr 15 j 19:16	2° \mathfrak{Q} 28'41	
morning rise	-5091 Feb 02 j 21:01	21° \mathfrak{X} 28'07		desc. node		-5086 May 24 j 01:45	11° \mathfrak{Q} 17'29	
	-5091 Feb 14 j 08:17	0° \mathfrak{B}				-5086 Jun 28 j 18:46	0° \mathfrak{M}	
	-5091 Mar 28 j 00:06	0° \mathfrak{A}				-5086 Aug 12 j 21:35	0° \mathfrak{A}	
	-5091 May 11 j 04:10	0° \mathfrak{X}				-5086 Sep 23 j 09:52	0° \mathfrak{M}	
	-5091 Jun 27 j 14:36	0° \mathfrak{Y}				-5086 Nov 03 j 11:09	0° \mathfrak{X}	
asc. node	-5091 Aug 20 j 20:21	0° \mathfrak{B} 25'07				-5086 Dec 15 j 09:21	0° \mathfrak{B}	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 32

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5085 Jan 27 j 19:37	0°♊			-5081 Sep 19 j 17:25	0°♎		
	-5085 Mar 13 j 21:01	0°♋			-5081 Oct 30 j 21:18	0°♏		
evening set	-5085 Mar 18 j 21:31	3°♋17'04			-5081 Dec 09 j 20:17	0°♑		
asc. node	-5085 Apr 12 j 11:36	19°♋14'21		desc. node	-5080 Jan 14 j 05:07	26°♑54'54		
	-5085 Apr 29 j 05:07	0°♌			-5080 Jan 18 j 06:23	0°♌		
					-5080 Feb 27 j 01:19	0°♍		
conjunction	-5085 May 07 j 03:50	5°♌05'26	0°13'52		-5080 Apr 08 j 14:25	0°♎		
minimum elong	-5085 May 07 j 03:18	5°♌04'35	0°13'52		-5080 May 24 j 19:04	0°♏		
behind sun begin	-5085 May 06 j 17:45	4°♌49'19		retrograde	-5080 Aug 11 j 03:10	28°♏51'45		
behind sun end	-5085 May 07 j 12:51	5°♌19'51		min. Earth dist.	-5080 Sep 13 j 13:00	21°♏22'48	0.57971 AU	
max. Earth dist.	-5085 May 12 j 03:32	8°♌16'50	2.66394 AU	opposition	-5080 Sep 19 j 09:04	19°♏05'00	-2°-59'-39	
	-5085 Jun 15 j 04:24	0°♍		greatest brilliancy	-5080 Sep 18 j 13:14	19°♏24'33	-1.7m	
morning rise	-5085 Jun 22 j 17:06	4°♍48'08		direct	-5080 Oct 25 j 23:34	10°♏40'41		
	-5085 Aug 01 j 03:17	0°♎		asc. node	-5080 Dec 02 j 07:27	17°♏56'59		
	-5085 Sep 16 j 18:17	0°♏			-5080 Dec 31 j 10:52	0°♋		
	-5085 Nov 02 j 06:10	0°♎			-5079 Feb 26 j 08:10	0°♌		
	-5085 Dec 19 j 10:47	0°♏			-5079 Apr 17 j 23:28	0°♍		
	-5084 Feb 08 j 01:46	0°♑			-5079 Jun 04 j 10:59	0°♎		
desc. node	-5084 Apr 10 j 04:40	24°♑14'39		evening set	-5079 Jul 14 j 23:03	27°♎02'38		
retrograde	-5084 Apr 21 j 06:37	25°♑01'05			-5079 Jul 19 j 06:19	0°♏		
opposition	-5084 May 21 j 21:50	19°♑53'27	-3°-7'-54	max. Earth dist.	-5079 Jul 30 j 21:03	8°♏03'33	2.50745 AU	
min. Earth dist.	-5084 May 21 j 06:45	20°♑03'28	0.37742 AU		-5079 Aug 30 j 16:00	0°♎		
greatest brilliancy	-5084 May 21 j 17:36	19°♑56'15	-2.9m					
direct	-5084 Jun 20 j 23:33	14°♑51'22		conjunction	-5079 Sep 03 j 21:49	3°♎05'13	0°54'29	
	-5084 Aug 13 j 01:13	0°♌		minimum elong	-5079 Sep 03 j 23:45	3°♎08'44	0°54'42	
	-5084 Oct 04 j 11:32	0°♍			-5079 Oct 10 j 02:33	0°♏		
	-5084 Nov 20 j 07:50	0°♎		morning rise	-5079 Oct 29 j 02:11	14°♏28'03		
	-5083 Jan 05 j 14:18	0°♏			-5079 Nov 18 j 05:16	0°♑		
	-5083 Feb 21 j 09:08	0°♋		desc. node	-5079 Dec 01 j 03:03	10°♑01'35		
asc. node	-5083 Feb 27 j 07:48	3°♋47'02			-5079 Dec 26 j 18:32	0°♌		
	-5083 Apr 09 j 16:08	0°♌			-5078 Feb 03 j 14:44	0°♍		
evening set	-5083 Apr 27 j 04:00	11°♌04'46			-5078 Mar 15 j 16:40	0°♎		
	-5083 May 26 j 22:07	0°♍			-5078 Apr 27 j 03:41	0°♏		
max. Earth dist.	-5083 Jun 03 j 18:01	5°♍00'24	2.66291 AU		-5078 Jun 12 j 23:18	0°♋		
					-5078 Aug 12 j 09:19	0°♌		
conjunction	-5083 Jun 13 j 04:11	11°♍03'08	0°52'51	retrograde	-5078 Sep 17 j 00:08	7°♌00'07		
minimum elong	-5083 Jun 13 j 02:53	11°♍01'02	0°53'01		-5078 Oct 19 j 16:57	30°♋		
	-5083 Jul 12 j 10:17	0°♎		asc. node	-5078 Oct 20 j 09:11	29°♋44'17		
morning rise	-5083 Jul 28 j 15:16	10°♎38'13		min. Earth dist.	-5078 Oct 24 j 18:59	27°♋59'14	0.65428 AU	
	-5083 Aug 26 j 16:53	0°♏		opposition	-5078 Oct 27 j 00:18	27°♋05'28	0°15'19	
	-5083 Oct 09 j 14:55	0°♎		greatest brilliancy	-5078 Oct 26 j 23:23	27°♋06'23	-1.4m	
	-5083 Nov 21 j 08:17	0°♏		direct	-5078 Dec 05 j 09:17	17°♋39'40		
	-5082 Jan 02 j 06:40	0°♑			-5077 Jan 25 j 17:15	0°♌		
	-5082 Feb 13 j 04:39	0°♌			-5077 Mar 26 j 16:12	0°♍		
desc. node	-5082 Feb 26 j 05:29	9°♌09'59			-5077 May 15 j 14:15	0°♎		
	-5082 Mar 28 j 23:47	0°♍			-5077 Jun 30 j 02:55	0°♏		
	-5082 May 21 j 23:44	0°♎			-5077 Aug 11 j 13:18	0°♎		
retrograde	-5082 Jun 27 j 08:20	8°♎17'43		evening set	-5077 Sep 02 j 18:08	16°♎24'49		
min. Earth dist.	-5082 Jul 25 j 08:06	2°♎59'27	0.45930 AU		-5077 Sep 20 j 17:09	0°♏		
greatest brilliancy	-5082 Jul 31 j 08:35	0°♎55'44	-2.3m	max. Earth dist.	-5077 Oct 05 j 07:46	11°♏13'17	2.38879 AU	
opposition	-5082 Aug 02 j 11:55	0°♎11'23	-6°-4'-17	desc. node	-5077 Oct 18 j 23:00	21°♏48'18		
	-5082 Aug 03 j 01:10	30°♋			-5077 Oct 29 j 10:44	0°♑		
direct	-5082 Sep 04 j 02:17	23°♍35'55						
	-5082 Oct 07 j 20:33	0°♎		conjunction	-5077 Nov 01 j 06:06	2°♑11'55	0°-9'-43	
	-5082 Dec 09 j 23:55	0°♏		minimum elong	-5077 Nov 01 j 05:15	2°♑10'16	0°09'43	
asc. node	-5081 Jan 15 j 06:43	20°♏49'41		behind sun begin	-5077 Oct 31 j 07:17	1°♑27'15		
	-5081 Jan 30 j 18:04	0°♋		behind sun end	-5077 Nov 02 j 03:13	2°♑53'18		
	-5081 Mar 21 j 06:23	0°♌			-5077 Dec 06 j 15:18	0°♌		
	-5081 May 08 j 11:09	0°♍		morning rise	-5076 Jan 06 j 21:44	24°♌23'34		
evening set	-5081 Jun 04 j 16:40	17°♍22'29			-5076 Jan 14 j 04:10	0°♍		
	-5081 Jun 24 j 02:40	0°♎			-5076 Feb 22 j 21:46	0°♎		
max. Earth dist.	-5081 Jun 29 j 10:16	3°♎29'42	2.60883 AU		-5076 Apr 04 j 14:43	0°♏		
					-5076 May 19 j 01:23	0°♋		
conjunction	-5081 Jul 21 j 23:49	18°♎31'37	1°11'16		-5076 Jul 06 j 14:19	0°♌		
minimum elong	-5081 Jul 21 j 23:35	18°♎31'14	1°11'32		-5076 Sep 03 j 16:13	0°♍		
	-5081 Aug 07 j 21:10	0°♏		asc. node	-5076 Sep 06 j 11:06	1°♍06'17		
morning rise	-5081 Sep 07 j 15:36	21°♏24'50		retrograde	-5076 Oct 20 j 18:56	10°♍57'55		

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 33

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

opposition	-5076 Nov 29 j 07:35	1°♄30'46	2°55'38			-5070 Feb 04 j 07:37	0°♊	
greatest brilliancy	-5076 Nov 29 j 10:52	1°♄27'30	-1.3m	evening set		-5070 Mar 01 j 16:40	17°♊11'16	
min. Earth dist.	-5076 Nov 30 j 20:18	0°♄54'08	0.66825 AU			-5070 Mar 20 j 23:21	0°♋	
	-5076 Dec 03 j 02:44	30°♌♎						
direct	-5075 Jan 09 j 05:10	21°♎34'00		conjunction		-5070 Apr 21 j 14:24	20°♋38'52	0°-4'-20
	-5075 Feb 19 j 02:00	0°♌		minimum elong		-5070 Apr 21 j 14:35	20°♋39'10	0°04'25
	-5075 Apr 21 j 08:11	0°♍		behind sun begin		-5070 Apr 20 j 18:49	20°♋07'13	
	-5075 Jun 08 j 09:40	0°♎		behind sun end		-5070 Apr 22 j 10:20	21°♋11'06	
	-5075 Jul 21 j 14:33	0°♏		asc. node		-5070 Apr 29 j 04:29	25°♋32'46	
	-5075 Aug 30 j 22:33	0°♐		max. Earth dist.		-5070 May 02 j 16:13	27°♋47'37	2.64968 AU
desc. node	-5075 Sep 04 j 19:38	3°♐43'50				-5070 May 06 j 02:32	0°♑	
	-5075 Oct 08 j 15:33	0°♑		morning rise		-5070 Jun 08 j 08:43	21°♑15'31	
evening set	-5075 Nov 04 j 21:46	21°♑26'16				-5070 Jun 22 j 02:49	0°♒	
	-5075 Nov 15 j 19:09	0°♒				-5070 Aug 08 j 11:15	0°♓	
	-5075 Dec 24 j 08:29	0°♓				-5070 Sep 25 j 01:48	0°♎	
						-5070 Nov 12 j 15:55	0°♏	
conjunction	-5074 Jan 08 j 22:55	11°♓54'09	-1°-6'-51			-5069 Jan 04 j 00:50	0°♐	
minimum elong	-5074 Jan 08 j 21:34	11°♓51'35	1°07'07	retrograde		-5069 Mar 21 j 12:04	25°♐26'05	
	-5074 Feb 02 j 03:40	0°♑		opposition		-5069 Apr 21 j 09:03	20°♐12'12	0°28'44
max. Earth dist.	-5074 Feb 25 j 08:25	16°♑53'12	2.45602 AU	greatest brilliancy		-5069 Apr 21 j 12:54	20°♐09'31	-2.8m
morning rise	-5074 Mar 12 j 23:01	27°♑58'52		min. Earth dist.		-5069 Apr 25 j 23:34	18°♐55'02	0.39250 AU
	-5074 Mar 15 j 19:58	0°♒		desc. node		-5069 Apr 27 j 20:12	18°♐24'32	
	-5074 Apr 28 j 18:34	0°♓		direct		-5069 May 23 j 15:18	14°♐24'48	
	-5074 Jun 14 j 05:45	0°♑				-5069 Jul 15 j 08:28	0°♑	
asc. node	-5074 Jul 25 j 11:07	25°♑03'16				-5069 Sep 03 j 14:13	0°♒	
	-5074 Aug 02 j 23:23	0°♒				-5069 Oct 18 j 04:16	0°♓	
	-5074 Sep 29 j 10:39	0°♓				-5069 Dec 01 j 03:54	0°♎	
retrograde	-5074 Nov 27 j 10:43	15°♓44'49				-5068 Jan 14 j 22:27	0°♏	
opposition	-5073 Jan 04 j 09:26	7°♓08'44	4°50'39			-5068 Feb 29 j 20:31	0°♋	
greatest brilliancy	-5073 Jan 05 j 11:33	6°♓43'30	-1.5m	asc. node		-5068 Mar 16 j 00:30	9°♋45'49	
min. Earth dist.	-5073 Jan 09 j 16:23	5°♓06'14	0.61897 AU	evening set		-5068 Apr 11 j 23:20	27°♋00'03	
	-5073 Jan 24 j 21:24	30°♌♎				-5068 Apr 16 j 16:14	0°♑	
direct	-5073 Feb 14 j 08:24	27°♌13'25		max. Earth dist.		-5068 May 25 j 14:54	24°♑48'33	2.66986 AU
	-5073 Mar 08 j 01:54	0°♍						
	-5073 May 13 j 18:16	0°♎		conjunction		-5068 May 29 j 13:03	27°♑18'42	0°39'31
	-5073 Jun 29 j 04:42	0°♏		minimum elong		-5068 May 29 j 11:50	27°♑16'45	0°39'37
desc. node	-5073 Jul 23 j 18:30	17°♏29'59				-5068 Jun 02 j 18:05	0°♒	
	-5073 Aug 09 j 16:14	0°♐		morning rise		-5068 Jul 14 j 01:48	26°♒34'02	
	-5073 Sep 17 j 22:21	0°♑				-5068 Jul 19 j 08:50	0°♓	
	-5073 Oct 26 j 11:14	0°♒				-5068 Sep 03 j 01:22	0°♎	
	-5073 Dec 04 j 09:38	0°♓				-5068 Oct 17 j 17:19	0°♏	
evening set	-5072 Jan 09 j 20:10	27°♓14'50				-5068 Nov 30 j 14:06	0°♐	
	-5072 Jan 13 j 14:24	0°♑				-5067 Jan 13 j 04:25	0°♑	
	-5072 Feb 24 j 15:15	0°♒				-5067 Feb 26 j 21:05	0°♒	
				desc. node		-5067 Mar 14 j 23:48	10°♒12'24	
conjunction	-5072 Mar 07 j 11:20	8°♒11'44	0°-50'-20			-5067 Apr 19 j 13:26	0°♓	
minimum elong	-5072 Mar 07 j 13:20	8°♒15'09	0°50'33	retrograde		-5067 Jun 04 j 13:01	12°♓31'17	
max. Earth dist.	-5072 Apr 05 j 05:53	27°♒41'26	2.57577 AU	min. Earth dist.		-5067 Jul 01 j 07:26	7°♓55'18	0.41274 AU
	-5072 Apr 08 j 17:01	0°♓		greatest brilliancy		-5067 Jul 06 j 10:43	6°♓20'26	-2.6m
morning rise	-5072 Apr 29 j 19:16	13°♓54'27		opposition		-5067 Jul 08 j 09:54	5°♓43'51	-6°-17'-10
	-5072 May 24 j 16:24	0°♑		direct		-5067 Aug 08 j 05:44	0°♓02'14	
asc. node	-5072 Jun 11 j 07:59	11°♑14'08				-5067 Oct 30 j 19:53	0°♑	
	-5072 Jul 11 j 07:15	0°♒				-5067 Dec 21 j 06:29	0°♒	
	-5072 Aug 29 j 18:57	0°♓		asc. node		-5066 Jan 31 j 21:24	25°♒25'54	
	-5072 Oct 22 j 11:31	0°♎				-5066 Feb 08 j 07:20	0°♓	
retrograde	-5071 Jan 12 j 13:27	26°♎59'38				-5066 Mar 28 j 17:04	0°♑	
opposition	-5071 Feb 16 j 13:17	19°♎48'23	5°10'46			-5066 May 15 j 10:37	0°♒	
greatest brilliancy	-5071 Feb 18 j 14:28	19°♎04'54	-2.0m	evening set		-5066 May 20 j 16:27	3°♒20'09	
min. Earth dist.	-5071 Feb 24 j 19:19	16°♎54'29	0.51125 AU	max. Earth dist.		-5066 Jun 19 j 01:49	22°♒14'02	2.63618 AU
direct	-5071 Mar 27 j 03:16	11°♎00'37				-5066 Jun 30 j 23:30	0°♓	
	-5071 May 26 j 07:22	0°♏						
desc. node	-5071 Jun 09 j 18:25	8°♏12'19		conjunction		-5066 Jul 06 j 12:53	3°♓39'00	1°07'22
	-5071 Jul 13 j 11:09	0°♐		minimum elong		-5066 Jul 06 j 12:01	3°♓37'34	1°07'37
	-5071 Aug 24 j 04:33	0°♑				-5066 Aug 14 j 21:33	0°♎	
	-5071 Oct 03 j 04:39	0°♒		morning rise		-5066 Aug 21 j 20:02	4°♎44'28	
	-5071 Nov 12 j 06:30	0°♓				-5066 Sep 27 j 01:59	0°♏	
	-5071 Dec 23 j 10:55	0°♑				-5066 Nov 07 j 17:39	0°♐	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 34

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5066 Dec 18 j 06:27	0°♊				-5060 Apr 30 j 18:54	0°♊		
	-5065 Jan 27 j 08:00	0°♋				-5060 Jun 16 j 12:19	0°♋		
desc. node	-5065 Jan 30 j 23:29	2°♋43'27				-5060 Jul 29 j 07:31	0°♌		
	-5065 Mar 08 j 22:44	0°♍				-5060 Sep 07 j 12:54	0°♍		
	-5065 Apr 21 j 01:55	0°♎			desc. node	-5060 Sep 21 j 14:00	10°♍47'50		
	-5065 Jun 12 j 11:31	0°♏			evening set	-5060 Oct 09 j 07:03	24°♍34'26		
retrograde	-5065 Jul 26 j 21:59	11°♏28'01				-5060 Oct 16 j 05:16	0°♐		
min. Earth dist.	-5065 Aug 27 j 05:33	4°♐46'36	0.53572 AU			-5060 Nov 23 j 08:19	0°♑		
greatest brilliancy	-5065 Sep 01 j 22:04	2°♐36'40	-1.9m						
opposition	-5065 Sep 03 j 07:39	2°♐04'33	-4°-19'-57		conjunction	-5060 Dec 12 j 22:12	15°♑20'10	0°-52'-59	
	-5065 Sep 08 j 21:43	30°♑♊			minimum elong	-5060 Dec 12 j 18:56	15°♑13'47	0°53'10	
direct	-5065 Oct 08 j 11:48	24°♑16'17				-5060 Dec 31 j 20:22	0°♒		
	-5065 Nov 09 j 19:22	0°♓			max. Earth dist.	-5059 Jan 27 j 23:21	20°♒37'18	2.40516 AU	
asc. node	-5065 Dec 19 j 21:27	16°♓47'43				-5059 Feb 09 j 13:29	0°♓		
	-5064 Jan 14 j 09:08	0°♈			morning rise	-5059 Feb 17 j 10:46	5°♓48'18		
	-5064 Mar 07 j 01:32	0°♉				-5059 Mar 23 j 04:10	0°♔		
	-5064 Apr 25 j 11:18	0°♊				-5059 May 06 j 04:21	0°♈		
	-5064 Jun 11 j 12:46	0°♋				-5059 Jun 22 j 03:08	0°♉		
evening set	-5064 Jun 28 j 07:15	11°♋03'44			asc. node	-5059 Aug 11 j 02:05	29°♉07'16		
max. Earth dist.	-5064 Jul 16 j 20:44	23°♋33'20	2.55188 AU			-5059 Aug 12 j 17:02	0°♊		
	-5064 Jul 26 j 06:46	0°♌				-5059 Oct 24 j 09:19	0°♋		
					retrograde	-5059 Nov 12 j 03:07	1°♋59'54		
conjunction	-5064 Aug 16 j 07:35	14°♌39'04	1°06'19			-5059 Nov 29 j 16:08	30°♌♈		
minimum elong	-5064 Aug 16 j 08:44	14°♌41'07	1°06'34		opposition	-5059 Dec 20 j 19:59	23°♌00'44	4°12'50	
	-5064 Sep 06 j 19:35	0°♍			greatest brilliancy	-5059 Dec 21 j 11:39	22°♌45'21	-1.4m	
morning rise	-5064 Oct 06 j 17:19	21°♍56'38			min. Earth dist.	-5059 Dec 24 j 15:54	21°♌30'29	0.64574 AU	
	-5064 Oct 17 j 11:47	0°♎			direct	-5058 Jan 30 j 23:23	12°♌59'48		
	-5064 Nov 25 j 20:58	0°♏				-5058 Apr 01 j 06:06	0°♍		
desc. node	-5064 Dec 17 j 20:45	16°♏58'52				-5058 May 24 j 13:42	0°♎		
	-5063 Jan 03 j 16:34	0°♐			desc. node	-5058 Jul 08 j 04:12	0°♏		
	-5063 Feb 11 j 18:59	0°♑				-5058 Aug 09 j 11:09	23°♏33'19		
	-5063 Mar 24 j 05:01	0°♒				-5058 Aug 18 j 00:47	0°♐		
	-5063 May 06 j 10:05	0°♓				-5058 Sep 25 j 23:35	0°♑		
	-5063 Jun 24 j 21:16	0°♔				-5058 Nov 03 j 07:15	0°♒		
retrograde	-5063 Sep 03 j 05:11	23°♔09'32				-5058 Dec 12 j 00:43	0°♓		
min. Earth dist.	-5063 Oct 09 j 10:11	14°♔40'39	0.63182 AU		evening set	-5058 Dec 16 j 14:28	3°♓29'25		
opposition	-5063 Oct 13 j 02:21	13°♔12'02	0°-56'-45			-5057 Jan 21 j 00:18	0°♔		
greatest brilliancy	-5063 Oct 12 j 22:13	13°♔16'12	-1.5m						
asc. node	-5063 Nov 05 j 23:51	5°♔30'10			conjunction	-5057 Feb 15 j 16:38	18°♔35'25	-1°-3'-12	
direct	-5063 Nov 20 j 12:30	4°♔06'16			minimum elong	-5057 Feb 15 j 18:21	18°♔38'30	1°03'28	
	-5062 Feb 09 j 04:30	0°♕				-5057 Mar 03 j 20:19	0°♕		
	-5062 Apr 04 j 14:41	0°♖			max. Earth dist.	-5057 Mar 24 j 08:48	14°♕11'29	2.53325 AU	
	-5062 May 23 j 06:42	0°♗			morning rise	-5057 Apr 13 j 09:03	27°♕43'11		
	-5062 Jul 07 j 10:36	0°♘				-5057 Apr 16 j 19:00	0°♈		
evening set	-5062 Aug 12 j 21:15	25°♘41'37				-5057 Jun 01 j 20:07	0°♉		
	-5062 Aug 18 j 19:44	0°♙			asc. node	-5057 Jun 29 j 00:28	17°♉06'35		
max. Earth dist.	-5062 Aug 30 j 14:22	8°♙38'21	2.43170 AU			-5057 Jul 19 j 23:39	0°♊		
	-5062 Sep 28 j 01:27	0°♚				-5057 Sep 09 j 05:14	0°♋		
						-5057 Nov 09 j 17:03	0°♌		
conjunction	-5062 Oct 07 j 11:36	7°♚12'14	0°20'10		retrograde	-5057 Dec 24 j 11:26	9°♚48'45		
minimum elong	-5062 Oct 07 j 13:01	7°♚14'57	0°20'16		opposition	-5056 Jan 29 j 19:23	1°♚58'44	5°21'36	
desc. node	-5062 Nov 04 j 17:35	29°♚05'11			greatest brilliancy	-5056 Jan 31 j 14:12	1°♚19'03	-1.7m	
	-5062 Nov 05 j 21:40	0°♛				-5056 Feb 04 j 03:29	30°♚♈		
morning rise	-5062 Dec 09 j 04:59	26°♛05'45			min. Earth dist.	-5056 Feb 06 j 03:24	29°♚16'13	0.55940 AU	
	-5062 Dec 14 j 04:34	0°♜			direct	-5056 Mar 09 j 17:30	22°♚32'09		
	-5061 Jan 21 j 19:03	0°♝				-5056 Apr 14 j 19:53	0°♛		
	-5061 Mar 02 j 14:01	0°♞				-5056 Jun 10 j 18:00	0°♙		
	-5061 Apr 13 j 10:33	0°♟			desc. node	-5056 Jun 26 j 11:51	10°♙19'10		
	-5061 May 28 j 09:40	0°♠				-5056 Jul 24 j 14:09	0°♚		
	-5061 Jul 17 j 22:21	0°♡				-5056 Sep 02 j 20:51	0°♛		
asc. node	-5061 Sep 24 j 01:56	26°♡53'54				-5056 Oct 12 j 01:16	0°♜		
retrograde	-5061 Oct 08 j 05:33	28°♡05'53				-5056 Nov 20 j 12:29	0°♝		
opposition	-5061 Nov 17 j 01:27	18°♡25'11	1°58'04			-5056 Dec 31 j 04:40	0°♞		
greatest brilliancy	-5061 Nov 17 j 00:16	18°♡26'22	-1.3m		evening set	-5055 Feb 11 j 02:11	29°♞37'08		
min. Earth dist.	-5061 Nov 17 j 02:32	18°♡24'05	0.67022 AU			-5055 Feb 11 j 15:25	0°♟		
direct	-5061 Dec 27 j 12:09	8°♡37'25				-5055 Mar 27 j 23:55	0°♠		
	-5060 Mar 07 j 15:17	0°♢							

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 35

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

conjunction	-5055 Apr 05 j 04:07	5° H 24'05	0°-22'-56	min. Earth dist.	-5050 Aug 06 j 22:33	15° Z 42'44	0.48702 AU
minimum elong	-5055 Apr 05 j 05:07	5° H 25'44	0°23'04	greatest brilliancy	-5050 Aug 12 j 23:39	13° Z 32'29	-2.2m
max. Earth dist.	-5055 Apr 22 j 15:33	16° H 50'28	2.62711 AU	opposition	-5050 Aug 14 j 22:16	12° Z 50'15	-5°-33'-5
	-5055 May 12 j 23:57	0° Y		direct	-5050 Sep 17 j 12:15	5° Z 46'18	
asc. node	-5055 May 15 j 20:29	1° Y 50'06			-5050 Dec 01 j 07:13	0° \approx	
morning rise	-5055 May 24 j 15:32	7° Y 28'13		asc. node	-5049 Jan 05 j 12:40	18° \approx 59'44	
	-5055 Jun 29 j 03:17	0° B			-5049 Jan 24 j 17:41	0° H	
	-5055 Aug 16 j 01:38	0° II			-5049 Mar 16 j 03:28	0° Y	
	-5055 Oct 04 j 03:26	0° S			-5049 May 03 j 17:11	0° B	
	-5055 Nov 25 j 14:10	0° Q		evening set	-5049 Jun 13 j 12:05	26° B 04'59	
retrograde	-5054 Feb 19 j 17:52	29° Q 43'18			-5049 Jun 19 j 12:01	0° II	
opposition	-5054 Mar 24 j 04:11	23° Q 46'03	3°17'06	max. Earth dist.	-5049 Jul 05 j 20:58	10° II 48'31	2.59048 AU
greatest brilliancy	-5054 Mar 25 j 14:47	23° Q 19'15	-2.5m				
min. Earth dist.	-5054 Mar 31 j 22:22	21° Q 22'40	0.43257 AU	conjunction	-5049 Jul 31 j 06:10	27° II 55'56	1°11'11
direct	-5054 Apr 28 j 08:14	16° Q 39'50		minimum elong	-5049 Jul 31 j 06:24	27° II 56'20	1°11'28
desc. node	-5054 May 14 j 13:34	18° Q 25'10			-5049 Aug 03 j 06:38	0° S	
	-5054 Jun 15 j 07:57	0° M			-5049 Sep 15 j 00:28	0° Q	
	-5054 Aug 04 j 15:55	0° A		morning rise	-5049 Sep 17 j 23:34	2° Q 07'43	
	-5054 Sep 16 j 17:20	0° M			-5049 Oct 26 j 00:22	0° M	
	-5054 Oct 28 j 14:22	0° J			-5049 Dec 04 j 18:13	0° A	
	-5054 Dec 10 j 01:04	0° Z		desc. node	-5048 Jan 04 j 15:17	23° A 38'30	
	-5053 Jan 22 j 19:57	0° \approx			-5048 Jan 12 j 22:21	0° M	
	-5053 Mar 09 j 02:54	0° H			-5048 Feb 21 j 09:50	0° J	
evening set	-5053 Mar 28 j 06:42	12° H 26'17			-5048 Apr 02 j 09:22	0° Z	
asc. node	-5053 Apr 02 j 16:01	15° H 55'01			-5048 May 17 j 00:18	0° \approx	
	-5053 Apr 24 j 14:13	0° Y			-5048 Jul 12 j 15:59	0° H	
				retrograde	-5048 Aug 19 j 19:10	8° H 21'06	
conjunction	-5053 May 15 j 19:43	13° Y 34'01	0°23'52	min. Earth dist.	-5048 Sep 23 j 06:20	0° H 29'13	0.60051 AU
minimum elong	-5053 May 15 j 18:52	13° Y 32'40	0°23'53		-5048 Sep 24 j 11:52	30° R \approx	
max. Earth dist.	-5053 May 17 j 14:18	14° Y 41'56	2.66841 AU	opposition	-5048 Sep 28 j 08:33	28° \approx 27'40	-2°-13'-39
	-5053 Jun 10 j 13:50	0° B		greatest brilliancy	-5048 Sep 27 j 19:24	28° \approx 40'45	-1.6m
morning rise	-5053 Jun 30 j 20:58	12° B 58'28		direct	-5048 Nov 04 j 15:39	19° \approx 47'00	
	-5053 Jul 27 j 09:14	0° II		asc. node	-5048 Nov 22 j 13:54	21° \approx 38'46	
	-5053 Sep 11 j 15:02	0° S			-5048 Dec 20 j 05:52	0° H	
	-5053 Oct 27 j 07:56	0° Q			-5047 Feb 20 j 02:32	0° Y	
	-5053 Dec 11 j 23:29	0° M			-5047 Apr 12 j 19:29	0° B	
	-5052 Jan 27 j 19:31	0° A			-5047 May 30 j 16:08	0° II	
	-5052 Mar 21 j 08:39	0° M			-5047 Jul 14 j 14:38	0° S	
desc. node	-5052 Mar 31 j 15:24	4° M 27'35		evening set	-5047 Jul 25 j 00:56	7° S 13'38	
retrograde	-5052 May 08 j 11:39	12° M 52'18		max. Earth dist.	-5047 Aug 09 j 11:26	18° S 06'22	2.48064 AU
min. Earth dist.	-5052 Jun 05 j 08:55	8° M 18'56	0.38259 AU		-5047 Aug 26 j 00:15	0° Q	
opposition	-5052 Jun 08 j 20:58	7° M 21'12	-4°-49'-59				
greatest brilliancy	-5052 Jun 08 j 00:30	7° M 35'18	-2.8m	conjunction	-5047 Sep 15 j 10:09	15° Q 00'24	0°44'10
direct	-5052 Jul 08 j 20:28	2° M 17'25		minimum elong	-5047 Sep 15 j 12:14	15° Q 04'18	0°44'20
	-5052 Sep 24 j 09:39	0° J			-5047 Oct 05 j 09:16	0° M	
	-5052 Nov 13 j 09:33	0° Z		morning rise	-5047 Nov 12 j 04:08	29° M 02'38	
	-5052 Dec 30 j 21:55	0° \approx			-5047 Nov 13 j 09:40	0° A	
	-5051 Feb 16 j 07:35	0° H		desc. node	-5047 Nov 21 j 11:30	6° A 17'15	
asc. node	-5051 Feb 17 j 13:17	0° H 46'52			-5047 Dec 21 j 20:23	0° M	
	-5051 Apr 04 j 22:26	0° Y			-5046 Jan 29 j 14:03	0° J	
evening set	-5051 May 05 j 18:33	19° Y 28'40			-5046 Mar 10 j 12:21	0° Z	
	-5051 May 22 j 07:54	0° B			-5046 Apr 21 j 15:45	0° \approx	
max. Earth dist.	-5051 Jun 09 j 06:54	11° B 29'41	2.65567 AU		-5046 Jun 06 j 12:45	0° H	
					-5046 Jul 31 j 04:33	0° Y	
conjunction	-5051 Jun 21 j 14:50	19° B 26'45	0°59'13	retrograde	-5046 Sep 24 j 18:34	15° Y 04'00	
minimum elong	-5051 Jun 21 j 13:35	19° B 24'45	0°59'25	asc. node	-5046 Oct 10 j 16:19	13° Y 20'38	
	-5051 Jul 07 j 20:14	0° II		min. Earth dist.	-5046 Nov 02 j 07:59	5° Y 47'42	0.66262 AU
morning rise	-5051 Aug 06 j 05:13	19° II 24'15		opposition	-5046 Nov 03 j 18:17	5° Y 13'07	0°54'40
	-5051 Aug 21 j 23:50	0° S		greatest brilliancy	-5046 Nov 03 j 16:03	5° Y 15'22	-1.3m
	-5051 Oct 04 j 15:08	0° Q			-5046 Nov 17 j 15:52	30° R H	
	-5051 Nov 15 j 22:15	0° M		direct	-5046 Dec 13 j 13:40	25° H 38'28	
	-5051 Dec 27 j 06:12	0° A			-5045 Jan 11 j 02:54	0° Y	
	-5050 Feb 06 j 07:30	0° M			-5045 Mar 20 j 05:42	0° B	
desc. node	-5050 Feb 16 j 16:34	7° M 31'04			-5045 May 10 j 08:00	0° II	
	-5050 Mar 20 j 10:54	0° J			-5045 Jun 25 j 06:08	0° S	
	-5050 May 06 j 13:03	0° Z			-5045 Aug 06 j 19:36	0° Q	
retrograde	-5050 Jul 08 j 19:52	21° Z 31'04		evening set	-5045 Sep 15 j 14:40	29° Q 42'04	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 36

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5045 Sep 16 j 00:04	0°♎		asc. node	-5040 Jun 01 j 13:06	8°♑03'01	
desc. node	-5045 Oct 09 j 08:42	18°♎00'54			-5040 Jul 06 j 08:10	0°♎	
	-5045 Oct 24 j 16:58	0°♏			-5040 Aug 24 j 03:05	0°♐	
					-5040 Oct 14 j 14:00	0°♑	
conjunction	-5045 Nov 16 j 08:16	17°♏47'47	0°-27'-9		-5040 Dec 16 j 02:32	0°♒	
minimum elong	-5045 Nov 16 j 05:57	17°♏43'12	0°27'12	retrograde	-5039 Jan 25 j 04:57	8°♒12'08	
max. Earth dist.	-5045 Nov 16 j 05:29	17°♏42'17	2.37673 AU	opposition	-5039 Feb 28 j 09:30	1°♒25'33	4°46'19
	-5045 Dec 01 j 20:26	0°♐		greatest brilliancy	-5039 Mar 02 j 10:08	0°♒44'11	-2.1m
	-5044 Jan 09 j 08:19	0°♑			-5039 Mar 04 j 14:01	30°♒♑	
morning rise	-5044 Jan 22 j 23:16	10°♑25'53		min. Earth dist.	-5039 Mar 08 j 21:23	28°♑33'34	0.48288 AU
	-5044 Feb 18 j 00:47	0°♑		direct	-5039 Apr 06 j 23:08	23°♑08'10	
	-5044 Mar 30 j 15:35	0°♒			-5039 May 10 j 12:50	0°♒	
	-5044 May 13 j 20:25	0°♓		desc. node	-5039 May 31 j 05:22	9°♒19'04	
	-5044 Jun 30 j 14:29	0°♑			-5039 Jul 05 j 06:16	0°♎	
	-5044 Aug 24 j 14:54	0°♎			-5039 Aug 17 j 13:07	0°♏	
asc. node	-5044 Aug 27 j 17:29	1°♎27'36			-5039 Sep 27 j 06:25	0°♐	
retrograde	-5044 Oct 28 j 18:40	18°♎49'55			-5039 Nov 06 j 19:26	0°♑	
opposition	-5044 Dec 07 j 01:04	9°♎31'41	3°26'01		-5039 Dec 18 j 07:59	0°♑	
greatest brilliancy	-5044 Dec 07 j 08:04	9°♎24'44	-1.3m		-5038 Jan 30 j 10:41	0°♒	
min. Earth dist.	-5044 Dec 09 j 09:06	8°♎36'01	0.66308 AU	evening set	-5038 Mar 11 j 15:59	26°♒57'54	
	-5043 Jan 08 j 14:51	30°♒♑			-5038 Mar 16 j 06:31	0°♓	
direct	-5043 Jan 17 j 02:05	29°♑32'05		asc. node	-5038 Apr 19 j 09:44	22°♓13'32	
	-5043 Jan 25 j 20:43	0°♎					
	-5043 Apr 14 j 11:00	0°♐		conjunction	-5038 Apr 30 j 14:39	29°♓26'23	0°06'23
	-5043 Jun 02 j 21:14	0°♑		minimum elong	-5038 Apr 30 j 14:24	29°♓25'58	0°06'21
	-5043 Jul 16 j 12:32	0°♒		behind sun begin	-5038 Apr 29 j 19:49	28°♓56'07	
desc. node	-5043 Aug 26 j 06:29	0°♎10'46		behind sun end	-5038 May 01 j 09:00	29°♓55'49	
	-5043 Aug 26 j 00:50	0°♎			-5038 May 01 j 11:37	0°♑	
	-5043 Oct 03 j 19:38	0°♏		max. Earth dist.	-5038 May 08 j 05:51	4°♑20'17	2.65860 AU
greatest brilliancy	-5043 Oct 15 j 03:08	8°♏52'33	1.2m	morning rise	-5038 Jun 16 j 15:24	29°♑29'14	
	-5043 Nov 11 j 00:03	0°♐			-5038 Jun 17 j 10:44	0°♎	
evening set	-5043 Nov 20 j 04:08	7°♐11'05			-5038 Aug 03 j 13:32	0°♐	
	-5043 Dec 19 j 13:58	0°♑			-5038 Sep 19 j 14:05	0°♑	
					-5038 Nov 05 j 20:57	0°♒	
conjunction	-5042 Jan 23 j 08:00	26°♑15'12	-1°-8'-38		-5038 Dec 24 j 18:35	0°♎	
minimum elong	-5042 Jan 23 j 08:05	26°♑15'21	1°08'55		-5037 Feb 19 j 05:55	0°♏	
	-5042 Jan 28 j 09:31	0°♑		retrograde	-5037 Apr 08 j 06:53	12°♏05'10	
max. Earth dist.	-5042 Mar 08 j 17:39	28°♑21'28	2.48440 AU	desc. node	-5037 Apr 18 j 08:12	11°♏27'30	
	-5042 Mar 11 j 01:44	0°♒		opposition	-5037 May 08 j 19:56	7°♏01'42	-1°-33'-40
morning rise	-5042 Mar 25 j 01:25	9°♒43'58		greatest brilliancy	-5037 May 08 j 22:30	6°♏59'58	-2.9m
	-5042 Apr 23 j 22:57	0°♓		min. Earth dist.	-5037 May 10 j 16:42	6°♏31'43	0.38044 AU
	-5042 Jun 09 j 04:31	0°♑		direct	-5037 Jun 08 j 14:48	1°♏46'20	
asc. node	-5042 Jul 15 j 15:42	22°♑31'54			-5037 Aug 24 j 02:10	0°♐	
	-5042 Jul 28 j 03:57	0°♎			-5037 Oct 10 j 19:02	0°♑	
	-5042 Sep 20 j 10:05	0°♐			-5037 Nov 25 j 02:44	0°♑	
retrograde	-5042 Dec 06 j 19:19	24°♐26'44			-5036 Jan 09 j 14:28	0°♒	
opposition	-5041 Jan 13 j 05:23	16°♐05'24	5°06'39		-5036 Feb 24 j 22:37	0°♓	
greatest brilliancy	-5041 Jan 14 j 13:40	15°♐34'36	-1.5m	asc. node	-5036 Mar 06 j 05:24	6°♓35'05	
min. Earth dist.	-5041 Jan 19 j 06:37	13°♐47'01	0.60018 AU		-5036 Apr 11 j 23:59	0°♑	
direct	-5041 Feb 22 j 22:04	6°♐17'07		evening set	-5036 Apr 20 j 17:34	5°♑32'47	
	-5041 May 05 j 12:52	0°♑			-5036 May 29 j 03:57	0°♎	
	-5041 Jun 23 j 00:19	0°♒		max. Earth dist.	-5036 May 30 j 23:21	1°♎09'18	2.66701 AU
desc. node	-5041 Jul 14 j 04:52	14°♒45'26					
	-5041 Aug 04 j 03:08	0°♎		conjunction	-5036 Jun 06 j 22:44	5°♎36'53	0°47'35
	-5041 Sep 12 j 16:23	0°♏		minimum elong	-5036 Jun 06 j 21:25	5°♎34'48	0°47'43
	-5041 Oct 21 j 09:37	0°♐			-5036 Jul 14 j 17:34	0°♐	
	-5041 Nov 29 j 11:29	0°♑		morning rise	-5036 Jul 22 j 09:06	4°♐59'26	
	-5040 Jan 08 j 19:02	0°♑			-5036 Aug 29 j 04:55	0°♑	
evening set	-5040 Jan 22 j 11:31	9°♑54'08			-5036 Oct 12 j 10:54	0°♒	
	-5040 Feb 19 j 22:00	0°♒			-5036 Nov 24 j 15:47	0°♎	
					-5035 Jan 06 j 05:33	0°♏	
conjunction	-5040 Mar 18 j 08:36	18°♒48'57	0°-40'-57		-5035 Feb 18 j 02:18	0°♐	
minimum elong	-5040 Mar 18 j 10:22	18°♒51'55	0°41'08	desc. node	-5035 Mar 05 j 09:24	10°♐24'10	
	-5040 Apr 04 j 00:50	0°♓			-5035 Apr 04 j 22:05	0°♑	
max. Earth dist.	-5040 Apr 11 j 23:00	5°♓15'19	2.59599 AU	retrograde	-5035 Jun 17 j 22:43	27°♑59'09	
morning rise	-5040 May 09 j 03:33	23°♓01'46		min. Earth dist.	-5035 Jul 15 j 04:01	23°♑02'39	0.43740 AU
	-5040 May 19 j 23:07	0°♑		greatest brilliancy	-5035 Jul 20 j 22:54	21°♑09'03	-2.4m

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 37

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

opposition	-5035 Jul 23 j 02:46	20° ♂ 26'13	-6°-18'-53	conjunction	-5030 Oct 21 j 02:48	21° ♂ 22'05	0°03'42
direct	-5035 Aug 23 j 21:49	14° ♂ 15'02		minimum elong	-5030 Oct 21 j 03:04	21° ♂ 22'37	0°03'46
	-5035 Oct 19 j 07:56	0° ♂		behind sun begin	-5030 Oct 20 j 01:31	20° ♂ 32'59	
	-5035 Dec 14 j 09:46	0° \approx		behind sun end	-5030 Oct 22 j 04:37	22° ♂ 12'16	
asc. node	-5034 Jan 22 j 03:42	22° \approx 57'34		desc. node	-5030 Oct 26 j 03:37	25° ♂ 17'16	
	-5034 Feb 02 j 19:17	0° ♂			-5030 Nov 01 j 04:27	0° ♂	
	-5034 Mar 23 j 19:04	0° ♂			-5030 Dec 09 j 09:57	0° ♂	
	-5034 May 10 j 18:56	0° ♂		morning rise	-5030 Dec 25 j 07:09	12° ♂ 25'49	
evening set	-5034 May 29 j 06:03	11° ♂ 45'26			-5029 Jan 16 j 22:59	0° ♂	
max. Earth dist.	-5034 Jun 24 j 22:54	29° ♂ 02'33	2.62205 AU		-5029 Feb 25 j 16:04	0° ♂	
	-5034 Jun 26 j 10:00	0° ♂			-5029 Apr 08 j 08:41	0° \approx	
					-5029 May 22 j 22:02	0° ♂	
conjunction	-5034 Jul 15 j 07:03	12° ♂ 28'08	1°10'11		-5029 Jul 11 j 00:47	0° ♂	
minimum elong	-5034 Jul 15 j 06:30	12° ♂ 27'14	1°10'27		-5029 Sep 12 j 18:29	0° ♂	
	-5034 Aug 10 j 06:56	0° ♂		asc. node	-5029 Sep 14 j 07:24	0° ♂ 29'26	
morning rise	-5034 Aug 31 j 05:59	14° ♂ 27'38		retrograde	-5029 Oct 16 j 00:20	5° ♂ 56'29	
	-5034 Sep 22 j 07:30	0° ♂			-5029 Nov 15 j 08:27	30° ♂	
	-5034 Nov 02 j 16:59	0° ♂		opposition	-5029 Nov 24 j 16:30	26° ♂ 22'42	2°32'19
	-5034 Dec 12 j 22:04	0° ♂		greatest brilliancy	-5029 Nov 24 j 17:23	26° ♂ 21'50	-1.3m
desc. node	-5033 Jan 21 j 08:50	29° ♂ 49'54		min. Earth dist.	-5029 Nov 25 j 12:48	26° ♂ 02'22	0.67039 AU
	-5033 Jan 21 j 14:11	0° ♂		direct	-5028 Jan 04 j 09:45	16° ♂ 29'33	
	-5033 Mar 02 j 16:06	0° ♂			-5028 Feb 27 j 04:46	0° ♂	
	-5033 Apr 13 j 16:50	0° ♂			-5028 Apr 24 j 19:36	0° ♂	
	-5033 May 31 j 12:27	0° \approx			-5028 Jun 11 j 07:58	0° ♂	
retrograde	-5033 Aug 05 j 08:59	22° \approx 04'14			-5028 Jul 24 j 09:44	0° ♂	
min. Earth dist.	-5033 Sep 06 j 21:19	14° \approx 55'30	0.56093 AU		-5028 Sep 02 j 17:28	0° ♂	
greatest brilliancy	-5033 Sep 12 j 05:38	12° \approx 50'43	-1.8m	desc. node	-5028 Sep 11 j 23:48	7° ♂ 05'47	
opposition	-5033 Sep 13 j 07:18	12° \approx 25'42	-3°-33'-59		-5028 Oct 11 j 10:36	0° ♂	
direct	-5033 Oct 19 j 06:35	4° \approx 16'35		evening set	-5028 Oct 24 j 03:22	9° ♂ 58'47	
asc. node	-5033 Dec 10 j 04:27	17° \approx 12'55			-5028 Nov 18 j 13:44	0° ♂	
	-5032 Jan 06 j 14:49	0° ♂			-5028 Dec 27 j 01:53	0° ♂	
	-5032 Mar 01 j 10:22	0° ♂		conjunction	-5028 Dec 28 j 09:02	0° ♂ 59'53	-1°-2'-32
	-5032 Apr 20 j 12:39	0° ♂		minimum elong	-5028 Dec 28 j 06:37	0° ♂ 55'14	1°02'46
	-5032 Jun 06 j 20:40	0° ♂			-5027 Feb 04 j 19:08	0° ♂	
evening set	-5032 Jul 07 j 15:51	20° ♂ 26'00		max. Earth dist.	-5027 Feb 14 j 18:46	7° ♂ 20'37	2.43265 AU
	-5032 Jul 21 j 16:39	0° ♂		morning rise	-5027 Mar 03 j 03:26	19° ♂ 11'01	
max. Earth dist.	-5032 Jul 24 j 14:33	2° ♂ 00'23	2.52813 AU		-5027 Mar 18 j 09:12	0° \approx	
					-5027 May 01 j 06:49	0° ♂	
conjunction	-5032 Aug 26 j 15:22	25° ♂ 16'12	1°00'27		-5027 Jun 16 j 20:34	0° ♂	
minimum elong	-5032 Aug 26 j 17:01	25° ♂ 19'10	1°00'42		-5027 Aug 01 j 08:01	27° ♂ 15'25	
	-5032 Sep 02 j 04:48	0° ♂		asc. node	-5027 Aug 06 j 03:56	0° ♂	
	-5032 Oct 12 j 18:40	0° ♂			-5027 Oct 05 j 23:27	0° ♂	
morning rise	-5032 Oct 18 j 23:49	4° ♂ 41'43		retrograde	-5027 Nov 20 j 18:47	10° ♂ 14'14	
	-5032 Nov 21 j 00:39	0° ♂		opposition	-5027 Dec 29 j 01:46	1° ♂ 27'07	4°35'44
desc. node	-5032 Dec 08 j 07:23	13° ♂ 23'31		greatest brilliancy	-5027 Dec 29 j 23:02	1° ♂ 06'24	-1.4m
	-5032 Dec 29 j 16:25	0° ♂			-5026 Jan 01 j 19:09	30° ♂	
	-5031 Feb 06 j 14:34	0° ♂		min. Earth dist.	-5026 Jan 02 j 16:43	29° ♂ 39'06	0.63222 AU
	-5031 Mar 18 j 18:25	0° ♂		direct	-5026 Feb 08 j 03:16	21° ♂ 28'22	
	-5031 Apr 30 j 10:00	0° \approx			-5026 Mar 20 j 08:24	0° ♂	
	-5031 Jun 16 j 23:41	0° ♂			-5026 May 17 j 23:42	0° ♂	
	-5031 Aug 25 j 22:30	0° ♂			-5026 Jul 02 j 14:30	0° ♂	
retrograde	-5031 Sep 11 j 05:02	1° ♂ 38'23		desc. node	-5026 Jul 30 j 22:04	20° ♂ 22'43	
	-5031 Sep 26 j 14:02	30° ♂			-5026 Aug 12 j 19:58	0° ♂	
min. Earth dist.	-5031 Oct 18 j 07:15	22° ♂ 51'28	0.64546 AU		-5026 Sep 20 j 23:04	0° ♂	
opposition	-5031 Oct 21 j 04:39	21° ♂ 41'32	0°-14'-8		-5026 Oct 29 j 09:09	0° ♂	
greatest brilliancy	-5031 Oct 21 j 03:48	21° ♂ 42'23	-1.4m		-5026 Dec 07 j 04:30	0° ♂	
asc. node	-5031 Oct 27 j 05:55	19° ♂ 18'02		evening set	-5026 Dec 30 j 14:38	17° ♂ 41'28	
direct	-5031 Nov 29 j 04:13	12° ♂ 24'12			-5025 Jan 16 j 05:47	0° ♂	
	-5030 Jan 31 j 15:01	0° ♂		conjunction	-5025 Feb 27 j 18:56	0° \approx 27'52	0°-56'-26
	-5030 Mar 29 j 20:36	0° ♂		minimum elong	-5025 Feb 27 j 20:58	0° \approx 31'24	0°56'41
	-5030 May 18 j 06:20	0° ♂			-5025 Feb 27 j 02:59	0° \approx	
	-5030 Jul 02 j 16:32	0° ♂		max. Earth dist.	-5025 Apr 01 j 03:24	22° \approx 39'45	2.55758 AU
evening set	-5030 Aug 14 j 03:32	7° ♂ 31'44			-5025 Apr 12 j 02:04	0° ♂	
max. Earth dist.	-5030 Sep 16 j 02:04	24° ♂ 27'43	2.40635 AU	morning rise	-5025 Apr 23 j 12:49	7° ♂ 35'36	
	-5030 Sep 23 j 09:10	0° ♂			-5025 May 28 j 00:45	0° ♂	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 38

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

asc. node	-5025 Jun 19 j 05:36	14°♊05'06		direct	-5020 Jul 26 j 07:05	18°♌51'51	
	-5025 Jul 14 j 19:27	0°♋			-5020 Sep 09 j 15:03	0°♌	
	-5025 Sep 02 j 21:34	0°♌			-5020 Nov 05 j 11:36	0°♍	
	-5025 Oct 28 j 20:21	0°♍			-5020 Dec 24 j 20:39	0°♎	
retrograde	-5024 Jan 04 j 12:53	19°♏47'28		asc. node	-5019 Feb 07 j 18:33	27°♐55'47	
opposition	-5024 Feb 09 j 04:25	12°♏17'45	5°18'52		-5019 Feb 11 j 02:14	0°♑	
greatest brilliancy	-5024 Feb 11 j 03:26	11°♏35'12	-1.9m		-5019 Mar 31 j 02:56	0°♑	
min. Earth dist.	-5024 Feb 17 j 02:12	9°♏26'59	0.53355 AU	evening set	-5019 May 14 j 07:53	27°♑51'09	
direct	-5024 Mar 19 j 10:22	3°♏10'24			-5019 May 17 j 16:58	0°♒	
	-5024 Jun 02 j 03:20	0°♒		max. Earth dist.	-5019 Jun 14 j 21:33	18°♓03'51	2.64597 AU
desc. node	-5024 Jun 16 j 22:11	9°♓04'21					
	-5024 Jul 17 j 23:45	0°♓		conjunction	-5019 Jun 30 j 02:51	27°♓56'48	1°04'24
	-5024 Aug 28 j 00:16	0°♐		minimum elong	-5019 Jun 30 j 01:47	27°♓55'04	1°04'37
	-5024 Oct 06 j 14:26	0°♐			-5019 Jul 03 j 06:15	0°♑	
	-5024 Nov 15 j 08:27	0°♑		morning rise	-5019 Aug 15 j 00:29	28°♑26'53	
	-5024 Dec 26 j 06:00	0°♑			-5019 Aug 17 j 07:27	0°♒	
	-5023 Feb 06 j 20:39	0°♒			-5019 Sep 29 j 17:27	0°♒	
evening set	-5023 Feb 21 j 21:18	10°♒16'24			-5019 Nov 10 j 16:14	0°♓	
	-5023 Mar 23 j 07:54	0°♑			-5019 Dec 21 j 13:24	0°♐	
					-5018 Jan 31 j 00:02	0°♐	
conjunction	-5023 Apr 14 j 16:51	14°♑41'16	0°-12'-9	desc. node	-5018 Feb 07 j 03:22	5°♐16'30	
minimum elong	-5023 Apr 14 j 17:23	14°♑42'08	0°12'15		-5018 Mar 13 j 03:13	0°♑	
behind sun begin	-5023 Apr 14 j 04:08	14°♑20'34			-5018 Apr 26 j 09:21	0°♒	
behind sun end	-5023 Apr 15 j 06:37	15°♑03'41			-5018 Jun 25 j 20:43	0°♒	
max. Earth dist.	-5023 Apr 28 j 12:37	23°♑39'33	2.64059 AU	retrograde	-5018 Jul 19 j 10:04	3°♒38'31	
asc. node	-5023 May 06 j 01:52	28°♑31'54			-5018 Aug 10 j 21:34	30°♒♐	
	-5023 May 08 j 08:38	0°♑		min. Earth dist.	-5018 Aug 18 j 18:21	27°♐20'02	0.51423 AU
morning rise	-5023 Jun 02 j 03:57	15°♑52'35		greatest brilliancy	-5018 Aug 24 j 15:34	25°♐08'25	-2.0m
	-5023 Jun 24 j 09:36	0°♒		opposition	-5018 Aug 26 j 07:18	24°♐31'09	-4°-53'-7
	-5023 Aug 10 j 23:27	0°♑		direct	-5018 Sep 29 j 18:14	17°♐01'41	
	-5023 Sep 28 j 03:18	0°♒			-5018 Nov 20 j 02:49	0°♒	
	-5023 Nov 17 j 01:06	0°♒		asc. node	-5018 Dec 26 j 18:12	17°♒44'26	
	-5022 Jan 13 j 01:41	0°♓			-5017 Jan 18 j 06:00	0°♑	
retrograde	-5022 Mar 08 j 02:24	14°♓07'36			-5017 Mar 10 j 20:28	0°♑	
opposition	-5022 Apr 08 j 13:10	8°♓36'44	1°51'19		-5017 Apr 28 j 21:37	0°♒	
greatest brilliancy	-5022 Apr 09 j 07:07	8°♓23'36	-2.7m		-5017 Jun 14 j 21:08	0°♑	
min. Earth dist.	-5022 Apr 14 j 20:50	6°♓46'06	0.40809 AU	evening set	-5017 Jun 22 j 10:55	4°♑58'15	
desc. node	-5022 May 04 j 23:20	2°♓36'13		max. Earth dist.	-5017 Jul 12 j 14:42	18°♑23'37	2.57005 AU
direct	-5022 May 12 j 03:00	2°♓15'16			-5017 Jul 29 j 16:25	0°♒	
	-5022 Jul 25 j 05:28	0°♐					
	-5022 Sep 09 j 04:07	0°♐		conjunction	-5017 Aug 09 j 19:38	7°♒41'23	1°09'10
	-5022 Oct 22 j 07:05	0°♑		minimum elong	-5017 Aug 09 j 20:23	7°♒42'42	1°09'26
	-5022 Dec 04 j 11:33	0°♒			-5017 Sep 10 j 08:29	0°♒	
	-5021 Jan 17 j 17:35	0°♒		morning rise	-5017 Sep 28 j 21:26	13°♒28'21	
	-5021 Mar 04 j 07:43	0°♑			-5017 Oct 21 j 04:44	0°♓	
asc. node	-5021 Mar 23 j 21:58	12°♑39'59			-5017 Nov 29 j 18:10	0°♐	
evening set	-5021 Apr 06 j 08:33	21°♑17'58		desc. node	-5017 Dec 26 j 00:53	20°♐13'12	
	-5021 Apr 19 j 22:54	0°♑			-5016 Jan 07 j 17:22	0°♐	
max. Earth dist.	-5021 May 22 j 23:30	21°♑03'54	2.67028 AU		-5016 Feb 15 j 22:54	0°♑	
					-5016 Mar 27 j 12:59	0°♒	
conjunction	-5021 May 24 j 07:21	21°♑54'40	0°33'12		-5016 May 10 j 03:40	0°♒	
minimum elong	-5021 May 24 j 06:15	21°♑52'56	0°33'16		-5016 Jun 30 j 10:50	0°♑	
	-5021 Jun 05 j 23:31	0°♒		retrograde	-5016 Aug 28 j 03:59	17°♑23'50	
morning rise	-5021 Jul 09 j 00:04	21°♒10'04		min. Earth dist.	-5016 Oct 02 j 14:33	9°♑11'12	0.61882 AU
	-5021 Jul 22 j 16:32	0°♑		opposition	-5016 Oct 06 j 22:33	7°♑27'03	-1°-28'-34
	-5021 Sep 06 j 14:58	0°♒		greatest brilliancy	-5016 Oct 06 j 15:01	7°♑34'36	-1.5m
	-5021 Oct 21 j 17:34	0°♒			-5016 Oct 30 j 00:35	30°♒♒	
	-5021 Dec 05 j 07:03	0°♓		asc. node	-5016 Nov 12 j 20:25	28°♒32'23	
	-5020 Jan 19 j 00:26	0°♐		direct	-5016 Nov 13 j 21:16	28°♒31'59	
	-5020 Mar 06 j 01:03	0°♐			-5016 Nov 29 j 18:31	0°♑	
desc. node	-5020 Mar 22 j 02:54	9°♐15'52			-5015 Feb 13 j 06:52	0°♑	
	-5020 May 16 j 22:52	0°♑			-5015 Apr 07 j 11:10	0°♒	
retrograde	-5020 May 24 j 07:23	0°♑22'32			-5015 May 25 j 19:50	0°♑	
	-5020 May 31 j 16:22	30°♒♐			-5015 Jul 09 j 22:39	0°♒	
min. Earth dist.	-5020 Jun 20 j 04:25	25°♐54'58	0.39625 AU	evening set	-5015 Aug 04 j 12:47	17°♒53'01	
greatest brilliancy	-5020 Jun 24 j 11:02	24°♐40'11	-2.7m	max. Earth dist.	-5015 Aug 20 j 10:43	29°♒19'02	2.45362 AU
opposition	-5020 Jun 26 j 00:46	24°♐12'30	-5°-54'-54		-5015 Aug 21 j 09:16	0°♒	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 39

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

conjunction	-5015 Sep 27 j 13:45	27° Ω 36'54	0°31'25	retrograde	-5010 Dec 16 j 14:25	3° Θ 27'43	
minimum elong	-5015 Sep 27 j 15:38	27° Ω 40'29	0°31'32		-5009 Jan 08 j 21:57	30° \mathbb{R} II	
	-5015 Sep 30 j 17:14	0° \mathbb{M}		opposition	-5009 Jan 22 j 11:05	25° Π 22'41	5°17'13
	-5015 Nov 08 j 15:44	0° $\underline{\mathbf{A}}$		greatest brilliancy	-5009 Jan 24 j 01:21	24° Π 46'41	-1.6m
desc. node	-5015 Nov 11 j 21:56	2° $\underline{\mathbf{A}}$ 32'25		min. Earth dist.	-5009 Jan 29 j 05:50	22° Π 50'03	0.57873 AU
greatest brilliancy	-5015 Nov 21 j 00:27	9° $\underline{\mathbf{A}}$ 39'14	1.2m	direct	-5009 Mar 03 j 18:39	15° Π 44'44	
morning rise	-5015 Nov 27 j 01:33	14° $\underline{\mathbf{A}}$ 23'09			-5009 Apr 25 j 05:09	0° Θ	
	-5015 Dec 17 j 00:10	0° \mathbb{M}			-5009 Jun 16 j 07:33	0° Ω	
	-5014 Jan 24 j 15:20	0° \mathbb{X}		desc. node	-5009 Jul 04 j 15:21	12° Ω 22'53	
	-5014 Mar 05 j 10:38	0° \mathbb{Z}			-5009 Jul 29 j 07:42	0° \mathbb{M}	
	-5014 Apr 16 j 08:07	0° \approx			-5009 Sep 07 j 06:14	0° $\underline{\mathbf{A}}$	
	-5014 May 31 j 13:07	0° \mathbb{X}			-5009 Oct 16 j 04:59	0° \mathbb{M}	
	-5014 Jul 22 j 05:53	0° \mathbb{Y}			-5009 Nov 24 j 10:56	0° \mathbb{X}	
asc. node	-5014 Sep 30 j 22:41	23° \mathbb{Y} 00'18			-5008 Jan 03 j 22:06	0° \mathbb{Z}	
retrograde	-5014 Oct 02 j 12:33	23° \mathbb{Y} 01'16		evening set	-5008 Feb 03 j 11:43	21° \mathbb{Z} 50'39	
opposition	-5014 Nov 11 j 10:37	13° \mathbb{Y} 15'27	1°32'17		-5008 Feb 15 j 03:59	0° \approx	
greatest brilliancy	-5014 Nov 11 j 08:27	13° \mathbb{Y} 17'39	-1.3m				
min. Earth dist.	-5014 Nov 10 j 19:26	13° \mathbb{Y} 30'45	0.66801 AU	conjunction	-5008 Mar 28 j 17:32	28° \approx 54'44	0°-30'-42
direct	-5014 Dec 21 j 15:10	3° \mathbb{Y} 33'12		minimum elong	-5008 Mar 28 j 18:53	28° \approx 57'00	0°30'51
	-5013 Mar 13 j 02:11	0° \mathbb{X}			-5008 Mar 30 j 08:47	0° \mathbb{X}	
	-5013 May 04 j 20:25	0° Π		max. Earth dist.	-5008 Apr 18 j 06:44	12° \mathbb{X} 28'44	2.61426 AU
	-5013 Jun 20 j 06:34	0° Θ			-5008 May 15 j 06:52	0° \mathbb{Y}	
	-5013 Aug 02 j 00:37	0° Ω		morning rise	-5008 May 18 j 03:21	1° \mathbb{Y} 50'01	
	-5013 Sep 11 j 06:30	0° \mathbb{M}		asc. node	-5008 May 22 j 18:36	4° \mathbb{Y} 48'21	
evening set	-5013 Sep 29 j 05:44	13° \mathbb{M} 49'11			-5008 Jul 01 j 11:52	0° \mathbb{X}	
desc. node	-5013 Sep 29 j 18:37	14° \mathbb{M} 14'09			-5008 Aug 18 j 17:47	0° Π	
	-5013 Oct 19 j 23:41	0° $\underline{\mathbf{A}}$			-5008 Oct 07 j 15:56	0° Θ	
	-5013 Nov 27 j 02:50	0° \mathbb{M}			-5008 Dec 01 j 21:59	0° Ω	
				retrograde	-5007 Feb 08 j 01:25	20° Ω 19'48	
conjunction	-5013 Dec 01 j 19:22	3° \mathbb{M} 41'07	0°-42'-55	opposition	-5007 Mar 13 j 07:22	14° Ω 00'04	4°03'49
minimum elong	-5013 Dec 01 j 16:07	3° \mathbb{M} 34'45	0°43'01	greatest brilliancy	-5007 Mar 15 j 02:38	13° Ω 25'01	-2.3m
	-5012 Jan 04 j 14:07	0° \mathbb{X}		min. Earth dist.	-5007 Mar 21 j 15:24	11° Ω 19'04	0.45462 AU
max. Earth dist.	-5012 Jan 05 j 15:11	0° \mathbb{X} 48'17	2.38647 AU	direct	-5007 Apr 18 j 16:20	6° Ω 19'24	
morning rise	-5012 Feb 07 j 05:47	25° \mathbb{X} 32'14		desc. node	-5007 May 21 j 17:24	13° Ω 05'41	
	-5012 Feb 13 j 05:54	0° \mathbb{Z}			-5007 Jun 25 j 01:15	0° \mathbb{M}	
	-5012 Mar 25 j 19:02	0° \approx			-5007 Aug 10 j 04:00	0° $\underline{\mathbf{A}}$	
	-5012 May 08 j 19:19	0° \mathbb{X}			-5007 Sep 20 j 23:24	0° \mathbb{M}	
	-5012 Jun 24 j 23:12	0° \mathbb{Y}			-5007 Nov 01 j 03:14	0° \mathbb{X}	
	-5012 Aug 16 j 14:03	0° \mathbb{X}			-5007 Dec 13 j 02:01	0° \mathbb{Z}	
asc. node	-5012 Aug 17 j 23:10	0° \mathbb{X} 42'53			-5006 Jan 25 j 11:54	0° \approx	
retrograde	-5012 Nov 05 j 22:27	26° \mathbb{X} 46'27			-5006 Mar 11 j 12:40	0° \mathbb{X}	
opposition	-5012 Dec 14 j 21:41	17° \mathbb{X} 38'09	3°54'00	evening set	-5006 Mar 21 j 07:22	6° \mathbb{X} 23'31	
greatest brilliancy	-5012 Dec 15 j 09:13	17° \mathbb{X} 26'45	-1.3m	asc. node	-5006 Apr 09 j 13:53	18° \mathbb{X} 53'17	
min. Earth dist.	-5012 Dec 18 j 01:07	16° \mathbb{X} 23'38	0.65472 AU		-5006 Apr 26 j 20:21	0° \mathbb{Y}	
direct	-5011 Jan 25 j 00:33	7° \mathbb{X} 37'13					
	-5011 Apr 06 j 14:47	0° Π		conjunction	-5006 May 09 j 09:59	8° \mathbb{Y} 02'54	0°16'42
	-5011 May 28 j 01:27	0° Θ		minimum elong	-5006 May 09 j 09:21	8° \mathbb{Y} 01'54	0°16'43
	-5011 Jul 11 j 06:36	0° Ω		max. Earth dist.	-5006 May 13 j 18:23	10° \mathbb{Y} 49'45	2.66516 AU
desc. node	-5011 Aug 16 j 15:14	26° Ω 41'40			-5006 Jun 12 j 19:29	0° \mathbb{X}	
	-5011 Aug 21 j 00:13	0° \mathbb{M}		morning rise	-5006 Jun 24 j 20:01	7° \mathbb{X} 40'10	
	-5011 Sep 28 j 21:41	0° $\underline{\mathbf{A}}$			-5006 Jul 29 j 18:01	0° Π	
	-5011 Nov 06 j 03:45	0° \mathbb{M}			-5006 Sep 14 j 07:36	0° Θ	
evening set	-5011 Dec 05 j 07:09	22° \mathbb{M} 41'38			-5006 Oct 30 j 15:36	0° Ω	
	-5011 Dec 14 j 18:57	0° \mathbb{X}			-5006 Dec 16 j 10:55	0° \mathbb{M}	
	-5010 Jan 23 j 15:47	0° \mathbb{Z}			-5005 Feb 03 j 21:53	0° $\underline{\mathbf{A}}$	
				desc. node	-5005 Apr 08 j 19:03	27° $\underline{\mathbf{A}}$ 48'04	
conjunction	-5010 Feb 05 j 21:15	9° \mathbb{Z} 40'34	-1°-6'-39	retrograde	-5005 Apr 26 j 05:22	29° $\underline{\mathbf{A}}$ 41'31	
minimum elong	-5010 Feb 05 j 22:28	9° \mathbb{Z} 42'44	1°06'56	opposition	-5005 May 26 j 21:44	24° $\underline{\mathbf{A}}$ 30'49	-3°-33'-58
	-5010 Mar 06 j 08:44	0° \approx		min. Earth dist.	-5005 May 25 j 18:08	24° $\underline{\mathbf{A}}$ 49'14	0.37770 AU
max. Earth dist.	-5010 Mar 18 j 05:46	8° \approx 16'27	2.51207 AU	greatest brilliancy	-5005 May 26 j 14:58	24° $\underline{\mathbf{A}}$ 35'20	-2.9m
morning rise	-5010 Apr 05 j 07:30	20° \approx 38'53		direct	-5005 Jun 25 j 23:11	19° $\underline{\mathbf{A}}$ 29'42	
	-5010 Apr 19 j 05:20	0° \mathbb{X}			-5005 Aug 08 j 00:14	0° \mathbb{M}	
	-5010 Jun 04 j 06:42	0° \mathbb{Y}			-5005 Oct 02 j 04:48	0° \mathbb{X}	
asc. node	-5010 Jul 05 j 22:10	19° \mathbb{Y} 47'50			-5005 Nov 18 j 14:29	0° \mathbb{Z}	
	-5010 Jul 22 j 16:37	0° \mathbb{X}			-5004 Jan 04 j 01:39	0° \approx	
	-5010 Sep 12 j 21:58	0° Π			-5004 Feb 19 j 22:21	0° \mathbb{X}	
	-5010 Nov 21 j 10:24	0° Θ		asc. node	-5004 Feb 25 j 10:37	3° \mathbb{X} 30'15	

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-5004 Apr 07 j 06:23	0°♊		desc. node	-5000 Nov 28 j 16:05	9°♎42'01	
evening set	-5004 Apr 29 j 09:33	14°♊00'30			-5000 Dec 24 j 17:23	0°♎	
	-5004 May 24 j 13:27	0°♋			-4999 Feb 01 j 12:25	0°♌	
max. Earth dist.	-5004 Jun 05 j 10:20	7°♋35'19	2.66182 AU		-4999 Mar 13 j 11:56	0°♍	
					-4999 Apr 24 j 18:13	0°♎	
conjunction	-5004 Jun 15 j 08:33	13°♋57'38	0°54'43		-4999 Jun 10 j 02:48	0°♏	
minimum elong	-5004 Jun 15 j 07:15	13°♋55'34	0°54'52		-4999 Aug 06 j 20:44	0°♊	
	-5004 Jul 10 j 02:49	0°♌		retrograde	-4999 Sep 19 j 00:54	9°♊50'44	
morning rise	-5004 Jul 30 j 19:25	13°♌35'08		asc. node	-4999 Oct 17 j 12:51	4°♊25'21	
	-5004 Aug 24 j 10:24	0°♍		min. Earth dist.	-4999 Oct 26 j 22:47	0°♊47'24	0.65611 AU
	-5004 Oct 07 j 08:41	0°♎			-4999 Oct 28 j 21:48	30°♏	
	-5004 Nov 19 j 01:10	0°♏		opposition	-4999 Oct 29 j 01:19	29°♏56'28	0°26'33
	-5004 Dec 30 j 21:10	0°♐		greatest brilliancy	-4999 Oct 28 j 23:50	29°♏57'57	-1.4m
	-5003 Feb 10 j 14:01	0°♑		direct	-4999 Dec 07 j 12:37	20°♏29'06	
desc. node	-5003 Feb 23 j 20:09	9°♑23'54			-4998 Jan 20 j 16:06	0°♊	
	-5003 Mar 25 j 20:18	0°♌			-4998 Mar 23 j 17:57	0°♋	
	-5003 May 15 j 23:13	0°♍			-4998 May 13 j 02:56	0°♌	
retrograde	-5003 Jun 30 j 05:25	12°♍12'47			-4998 Jun 27 j 21:00	0°♍	
min. Earth dist.	-5003 Jul 28 j 09:34	6°♍48'14	0.46442 AU		-4998 Aug 09 j 10:40	0°♎	
greatest brilliancy	-5003 Aug 03 j 10:00	4°♍43'14	-2.3m	evening set	-4998 Sep 05 j 16:24	20°♎09'16	
opposition	-5003 Aug 05 j 12:24	3°♍59'07	-5°-58'-26		-4998 Sep 18 j 16:23	0°♏	
	-5003 Aug 18 j 04:27	30°♌		max. Earth dist.	-4998 Oct 11 j 18:19	17°♏46'05	2.38517 AU
direct	-5003 Sep 07 j 07:38	27°♌17'56		desc. node	-4998 Oct 16 j 12:51	21°♏28'48	
	-5003 Sep 28 j 10:26	0°♍			-4998 Oct 27 j 10:41	0°♎	
	-5003 Dec 06 j 15:01	0°♏					
asc. node	-5002 Jan 12 j 09:45	20°♏49'41		conjunction	-4998 Nov 04 j 15:50	6°♎26'21	0°-13'-55
	-5002 Jan 27 j 23:56	0°♏		minimum elong	-4998 Nov 04 j 14:38	6°♎23'59	0°13'56
	-5002 Mar 18 j 17:34	0°♊		behind sun begin	-4998 Nov 04 j 00:17	5°♎55'50	
	-5002 May 06 j 01:23	0°♋		behind sun end	-4998 Nov 05 j 04:59	6°♎52'09	
evening set	-5002 Jun 06 j 22:58	20°♋20'50			-4998 Dec 04 j 15:00	0°♌	
	-5002 Jun 21 j 19:20	0°♌		morning rise	-4997 Jan 10 j 15:17	28°♌51'39	
max. Earth dist.	-5002 Jul 01 j 03:40	6°♌08'39	2.60559 AU		-4997 Jan 12 j 02:45	0°♌	
					-4997 Feb 20 j 18:29	0°♍	
conjunction	-5002 Jul 24 j 07:44	21°♌36'44	1°11'24		-4997 Apr 03 j 08:38	0°♎	
minimum elong	-5002 Jul 24 j 07:37	21°♌36'32	1°11'40		-4997 May 17 j 14:52	0°♏	
	-5002 Aug 05 j 15:54	0°♍			-4997 Jul 04 j 18:24	0°♊	
morning rise	-5002 Sep 10 j 03:25	24°♍42'41			-4997 Aug 31 j 00:59	0°♋	
	-5002 Sep 17 j 13:46	0°♎		asc. node	-4997 Sep 04 j 14:09	1°♋55'46	
	-5002 Oct 28 j 18:32	0°♏		retrograde	-4997 Oct 23 j 21:02	13°♋45'39	
	-5002 Dec 07 j 17:39	0°♐		opposition	-4997 Dec 02 j 08:14	4°♋19'56	3°04'15
desc. node	-5001 Jan 11 j 19:29	26°♐43'04		greatest brilliancy	-4997 Dec 02 j 12:08	4°♋16'02	-1.3m
	-5001 Jan 16 j 02:48	0°♑		min. Earth dist.	-4997 Dec 03 j 23:48	3°♋40'28	0.66765 AU
	-5001 Feb 24 j 19:13	0°♌			-4997 Dec 13 j 14:15	30°♌	
	-5001 Apr 07 j 02:37	0°♍		direct	-4996 Jan 12 j 06:28	24°♊22'46	
	-5001 May 22 j 15:08	0°♎			-4996 Feb 13 j 20:46	0°♋	
	-5001 Jul 27 j 18:28	0°♏			-4996 Apr 18 j 09:20	0°♌	
retrograde	-5001 Aug 14 j 08:17	2°♏00'38			-4996 Jun 05 j 23:38	0°♍	
	-5001 Aug 31 j 01:30	30°♌			-4996 Jul 19 j 10:17	0°♎	
min. Earth dist.	-5001 Sep 16 j 23:03	24°♏27'37	0.58364 AU		-4996 Aug 28 j 21:21	0°♏	
opposition	-5001 Sep 22 j 16:23	22°♏12'10	-2°-47'-28	desc. node	-4996 Sep 02 j 10:29	3°♏28'08	
greatest brilliancy	-5001 Sep 21 j 22:07	22°♏30'11	-1.7m		-4996 Oct 06 j 15:46	0°♐	
direct	-5001 Oct 29 j 09:46	13°♏44'53		evening set	-4996 Nov 08 j 08:22	25°♎42'25	
asc. node	-5001 Nov 30 j 10:50	19°♏15'55			-4996 Nov 13 j 19:25	0°♑	
	-5001 Dec 28 j 06:10	0°♏			-4996 Dec 22 j 07:42	0°♌	
	-5000 Feb 24 j 10:44	0°♊					
	-5000 Apr 15 j 10:35	0°♋		conjunction	-4995 Jan 12 j 08:21	16°♌01'43	-1°-7'-36
	-5000 Jun 02 j 02:38	0°♌		minimum elong	-4995 Jan 12 j 07:22	15°♌59'51	1°07'53
evening set	-5000 Jul 17 j 10:07	0°♍15'30			-4995 Jan 31 j 01:02	0°♍	
	-5000 Jul 17 j 01:06	0°♍		max. Earth dist.	-4995 Feb 28 j 12:03	20°♍41'56	2.46124 AU
max. Earth dist.	-5000 Aug 02 j 06:10	11°♍15'17	2.50235 AU		-4995 Mar 13 j 14:53	0°♎	
	-5000 Aug 28 j 13:02	0°♎		morning rise	-4995 Mar 15 j 22:55	1°♏38'24	
					-4995 Apr 26 j 10:35	0°♏	
conjunction	-5000 Sep 06 j 15:00	6°♎36'58	0°52'06		-4995 Jun 11 j 17:47	0°♊	
minimum elong	-5000 Sep 06 j 17:00	6°♎40'37	0°52'18	asc. node	-4995 Jul 22 j 12:59	24°♊57'13	
	-5000 Oct 08 j 00:59	0°♏			-4995 Jul 31 j 03:26	0°♋	
morning rise	-5000 Nov 01 j 06:50	18°♏29'39			-4995 Sep 25 j 07:14	0°♌	
	-5000 Nov 16 j 04:21	0°♐		retrograde	-4995 Nov 29 j 18:28	18°♌41'14	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 41

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

opposition	-4994 Jan 06 j 14:39	10°II07'37	4°54'49			-4989 Feb 27 j 10:50	0°✠	
greatest brilliancy	-4994 Jan 07 j 17:54	9°II41'20	-1.5m	asc. node		-4989 Mar 14 j 02:43	9°✠26'13	
min. Earth dist.	-4994 Jan 12 j 00:29	8°II02'36	0.61575 AU	evening set		-4989 Apr 15 j 05:59	29°✠58'31	
direct	-4994 Feb 16 j 12:14	0°II13'37				-4989 Apr 15 j 06:54	0°Υ	
	-4994 May 10 j 15:03	0°☿		max. Earth dist.		-4989 May 28 j 07:34	27°Υ24'07	2.66946 AU
	-4994 Jun 26 j 17:38	0°♂						
desc. node	-4994 Jul 21 j 08:39	17°♂24'45		conjunction		-4989 Jun 01 j 17:50	0°♂13'43	0°41'52
	-4994 Aug 07 j 11:11	0°♍		minimum elong		-4989 Jun 01 j 16:36	0°♂11'44	0°41'58
	-4994 Sep 15 j 20:01	0°♊				-4989 Jun 01 j 09:15	0°♂	
	-4994 Oct 24 j 09:47	0°♋		morning rise		-4989 Jul 17 j 05:33	29°♂29'22	
	-4994 Dec 02 j 07:49	0°♌				-4989 Jul 18 j 00:26	0°♂	
	-4993 Jan 11 j 11:20	0°♍				-4989 Sep 01 j 16:54	0°☿	
evening set	-4993 Jan 12 j 20:48	1°♍01'11				-4989 Oct 16 j 07:50	0°♂	
	-4993 Feb 22 j 10:18	0°♎				-4989 Nov 29 j 01:59	0°♍	
						-4988 Jan 11 j 11:03	0°♊	
conjunction	-4993 Mar 11 j 04:33	11°♎35'43	0°-47'-56			-4988 Feb 24 j 15:31	0°♋	
minimum elong	-4993 Mar 11 j 06:31	11°♎39'05	0°48'09	desc. node		-4988 Mar 12 j 12:52	10°♋55'24	
	-4993 Apr 07 j 09:58	0°✠				-4988 Apr 14 j 03:41	0°♌	
max. Earth dist.	-4993 Apr 08 j 06:31	0°✠34'15	2.57963 AU	retrograde		-4988 Jun 07 j 18:55	16°♌50'53	
morning rise	-4993 May 03 j 05:12	17°✠00'38		min. Earth dist.		-4988 Jul 04 j 12:30	12°♌12'10	0.41719 AU
	-4993 May 23 j 07:07	0°Υ		greatest brilliancy		-4988 Jul 09 j 20:18	10°♌33'00	-2.6m
asc. node	-4993 Jun 09 j 10:28	10°Υ56'12		opposition		-4988 Jul 11 j 20:46	9°♌55'03	-6°-20'-41
	-4993 Jul 09 j 19:05	0°♉		direct		-4988 Aug 11 j 21:10	4°♌08'03	
	-4993 Aug 28 j 00:56	0°♈				-4988 Oct 27 j 00:54	0°♍	
	-4993 Oct 19 j 22:52	0°☿				-4988 Dec 18 j 09:33	0°♎	
	-4992 Jan 08 j 17:07	0°♂		asc. node		-4987 Jan 29 j 00:40	25°♎17'06	
retrograde	-4992 Jan 16 j 09:25	0°♂21'27				-4987 Feb 05 j 17:01	0°✠	
	-4992 Jan 23 j 22:09	30°♌☿				-4987 Mar 26 j 05:45	0°Υ	
opposition	-4992 Feb 20 j 06:55	23°☿14'33	5°05'04			-4987 May 13 j 01:28	0°♂	
greatest brilliancy	-4992 Feb 22 j 08:06	22°☿31'26	-2.0m	evening set		-4987 May 22 j 20:46	6°♂14'07	
min. Earth dist.	-4992 Feb 28 j 15:44	20°☿19'49	0.50601 AU	max. Earth dist.		-4987 Jun 20 j 14:44	24°♂44'24	2.63372 AU
direct	-4992 Mar 29 j 17:20	14°☿32'11				-4987 Jun 28 j 16:17	0°♈	
	-4992 May 21 j 23:28	0°♂						
desc. node	-4992 Jun 07 j 08:52	8°♂53'57		conjunction		-4987 Jul 08 j 17:47	6°♈36'33	1°08'16
	-4992 Jul 10 j 15:52	0°♍		minimum elong		-4987 Jul 08 j 16:59	6°♈35'15	1°08'30
	-4992 Aug 21 j 18:21	0°♊				-4987 Aug 12 j 15:55	0°☿	
	-4992 Sep 30 j 21:53	0°♋		morning rise		-4987 Aug 24 j 03:29	7°☿51'13	
	-4992 Nov 10 j 00:49	0°♌				-4987 Sep 24 j 21:18	0°♂	
	-4992 Dec 21 j 05:06	0°♍				-4987 Nov 05 j 13:02	0°♍	
	-4991 Feb 02 j 00:58	0°♎				-4987 Dec 16 j 00:59	0°♊	
evening set	-4991 Mar 04 j 04:58	20°♎24'36				-4986 Jan 25 j 00:30	0°♋	
	-4991 Mar 18 j 15:37	0°✠		desc. node		-4986 Jan 28 j 12:22	2°♋37'11	
						-4986 Mar 06 j 11:02	0°♌	
conjunction	-4991 Apr 23 j 22:23	23°✠40'37	0°-1'-21			-4986 Apr 18 j 04:05	0°♍	
minimum elong	-4991 Apr 23 j 22:28	23°✠40'45	0°01'25			-4986 Jun 07 j 15:07	0°♎	
behind sun begin	-4991 Apr 23 j 02:17	23°✠08'10		retrograde		-4986 Jul 29 j 07:23	14°♎52'41	
behind sun end	-4991 Apr 24 j 18:40	24°✠13'20		min. Earth dist.		-4986 Aug 29 j 21:23	8°♎05'37	0.54083 AU
asc. node	-4991 Apr 26 j 07:03	25°✠12'05		opposition		-4986 Sep 05 j 20:32	5°♎25'27	-4°-8'-26
	-4991 May 03 j 17:47	0°Υ		greatest brilliancy		-4986 Sep 04 j 12:40	5°♎56'04	-1.9m
max. Earth dist.	-4991 May 04 j 05:00	0°Υ18'02	2.65154 AU			-4986 Sep 22 j 04:07	30°♌☿	
morning rise	-4991 Jun 10 j 13:05	24°Υ10'09		direct		-4986 Oct 11 j 03:43	27°♍33'03	
	-4991 Jun 19 j 17:10	0°♉				-4986 Oct 31 j 14:48	0°♎	
	-4991 Aug 06 j 00:14	0°♈		asc. node		-4986 Dec 17 j 01:14	17°♎20'43	
	-4991 Sep 22 j 11:34	0°☿				-4985 Jan 11 j 02:13	0°✠	
	-4991 Nov 09 j 17:36	0°♂				-4985 Mar 05 j 08:37	0°Υ	
	-4991 Dec 31 j 00:51	0°♍				-4985 Apr 24 j 00:04	0°♌	
retrograde	-4990 Mar 25 j 06:44	29°♍45'57				-4985 Jun 10 j 05:14	0°♈	
opposition	-4990 Apr 25 j 03:02	24°♍34'58	0°01'32	evening set		-4985 Jul 01 j 14:08	14°♈05'41	
greatest brilliancy	-4990 Apr 25 j 02:55	24°♍35'03	-2.8m	max. Earth dist.		-4985 Jul 19 j 19:18	26°♈23'06	2.54777 AU
desc. node	-4990 Apr 25 j 11:16	24°♍29'16				-4985 Jul 25 j 02:05	0°☿	
min. Earth dist.	-4990 Apr 29 j 06:11	23°♍26'32	0.38966 AU					
direct	-4990 May 27 j 00:20	18°♍54'36		conjunction		-4985 Aug 19 j 18:02	17°☿53'03	1°05'01
	-4990 Jul 09 j 13:20	0°♊		minimum elong		-4985 Aug 19 j 19:18	17°☿55'18	1°05'17
	-4990 Aug 31 j 08:26	0°♋				-4985 Sep 05 j 17:05	0°♂	
	-4990 Oct 15 j 11:26	0°♌		morning rise		-4985 Oct 10 j 12:10	25°♂33'20	
	-4990 Nov 28 j 15:49	0°♍				-4985 Oct 16 j 10:35	0°♍	
	-4989 Jan 12 j 12:08	0°♎				-4985 Nov 24 j 20:06	0°♊	

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

desc. node	-4985 Dec 16 j 11:28	16°♄43'07		direct	-4979 Feb 02 j 01:40	15°♄53'42	
	-4984 Jan 02 j 15:00	0°♌			-4979 Mar 28 j 00:43	0°♈	
	-4984 Feb 10 j 15:30	0°♊			-4979 May 21 j 20:56	0°♊	
	-4984 Mar 21 j 21:58	0°♈			-4979 Jul 05 j 21:10	0°♈	
	-4984 May 03 j 19:58	0°♊		desc. node	-4979 Aug 07 j 02:01	23°♈22'33	
	-4984 Jun 21 j 10:30	0°♈			-4979 Aug 15 j 22:05	0°♈	
retrograde	-4984 Sep 05 j 07:11	26°♈07'42			-4979 Sep 23 j 22:48	0°♈	
min. Earth dist.	-4984 Oct 11 j 16:23	17°♈35'43	0.63478 AU		-4979 Nov 01 j 06:49	0°♌	
opposition	-4984 Oct 15 j 05:48	16°♈09'52	0°-44'-40		-4979 Dec 09 j 23:32	0°♊	
greatest brilliancy	-4984 Oct 15 j 02:38	16°♈13'03	-1.5m	evening set	-4979 Dec 19 j 20:41	7°♊32'06	
asc. node	-4984 Nov 03 j 02:37	9°♈35'34			-4978 Jan 18 j 21:36	0°♈	
direct	-4984 Nov 22 j 19:21	7°♈01'51					
	-4983 Feb 05 j 13:52	0°♈		conjunction	-4978 Feb 18 j 14:59	22°♈13'07	-1°-1'-38
	-4983 Apr 01 j 21:14	0°♈		minimum elong	-4978 Feb 18 j 16:50	22°♈16'24	1°01'54
	-4983 May 20 j 20:50	0°♈			-4978 Mar 01 j 15:40	0°♊	
	-4983 Jul 05 j 05:09	0°♊		max. Earth dist.	-4978 Mar 26 j 16:38	17°♊18'26	2.53804 AU
evening set	-4983 Aug 15 j 13:27	29°♊09'29			-4978 Apr 14 j 12:11	0°♈	
	-4983 Aug 16 j 17:18	0°♈		morning rise	-4978 Apr 15 j 22:37	0°♈57'27	
max. Earth dist.	-4983 Sep 02 j 16:45	12°♈27'57	2.42689 AU		-4978 May 30 j 10:42	0°♈	
	-4983 Sep 26 j 00:56	0°♈		asc. node	-4978 Jun 26 j 03:32	16°♈51'47	
					-4978 Jul 17 j 10:05	0°♈	
conjunction	-4983 Oct 10 j 12:28	11°♈04'40	0°16'22		-4978 Sep 06 j 05:22	0°♈	
minimum elong	-4983 Oct 10 j 13:39	11°♈06'57	0°16'27		-4978 Nov 04 j 11:09	0°♊	
desc. node	-4983 Nov 02 j 08:08	28°♈46'00		retrograde	-4978 Dec 27 j 01:21	12°♊58'49	
	-4983 Nov 03 j 22:04	0°♈		opposition	-4977 Feb 01 j 07:12	5°♊12'17	5°20'49
morning rise	-4983 Dec 12 j 17:57	0°♌25'34		greatest brilliancy	-4977 Feb 03 j 02:43	4°♊32'09	-1.8m
	-4983 Dec 12 j 04:53	0°♌		min. Earth dist.	-4977 Feb 08 j 18:16	2°♊27'57	0.55474 AU
	-4982 Jan 19 j 18:15	0°♊			-4977 Feb 16 j 00:50	30°♈	
	-4982 Feb 28 j 11:02	0°♈		direct	-4977 Mar 13 j 02:30	25°♈49'17	
	-4982 Apr 11 j 03:59	0°♊			-4977 Apr 08 j 10:49	0°♊	
	-4982 May 25 j 20:52	0°♈			-4977 Jun 08 j 17:17	0°♈	
	-4982 Jul 14 j 17:41	0°♈		desc. node	-4977 Jun 25 j 02:10	10°♈32'59	
asc. node	-4982 Sep 21 j 04:01	28°♈46'22			-4977 Jul 23 j 03:29	0°♈	
	-4982 Sep 28 j 01:04	0°♈			-4977 Sep 01 j 15:25	0°♈	
retrograde	-4982 Oct 10 j 06:19	0°♈54'25			-4977 Oct 10 j 21:56	0°♌	
	-4982 Oct 21 j 22:07	30°♈			-4977 Nov 19 j 09:27	0°♊	
opposition	-4982 Nov 19 j 01:52	21°♈14'38	2°07'58		-4977 Dec 30 j 00:52	0°♈	
greatest brilliancy	-4982 Nov 19 j 00:55	21°♈15'35	-1.3m		-4976 Feb 10 j 10:12	0°♊	
min. Earth dist.	-4982 Nov 19 j 05:54	21°♈10'35	0.67059 AU	evening set	-4976 Feb 14 j 18:01	2°♊59'13	
direct	-4982 Dec 29 j 14:20	11°♈25'54			-4976 Mar 25 j 17:09	0°♈	
	-4981 Mar 04 j 19:55	0°♈					
	-4981 Apr 29 j 02:27	0°♈		conjunction	-4976 Apr 07 j 13:56	8°♈29'49	0°-20'-1
	-4981 Jun 15 j 04:25	0°♊		minimum elong	-4976 Apr 07 j 14:49	8°♈31'16	0°20'09
	-4981 Jul 28 j 04:03	0°♈		max. Earth dist.	-4976 Apr 24 j 08:07	19°♈26'54	2.62976 AU
	-4981 Sep 06 j 11:51	0°♈			-4976 May 10 j 15:44	0°♈	
desc. node	-4981 Sep 20 j 04:13	10°♈29'53		asc. node	-4976 May 12 j 23:34	1°♈29'50	
evening set	-4981 Oct 13 j 14:17	28°♈43'25		morning rise	-4976 May 26 j 20:11	10°♈22'45	
	-4981 Oct 15 j 05:22	0°♈			-4976 Jun 26 j 17:38	0°♈	
	-4981 Nov 22 j 08:29	0°♌			-4976 Aug 13 j 13:28	0°♈	
					-4976 Oct 01 j 09:03	0°♊	
conjunction	-4981 Dec 17 j 10:23	19°♌37'58	0°-55'-35		-4976 Nov 22 j 00:26	0°♈	
minimum elong	-4981 Dec 17 j 07:14	19°♌31'49	0°55'46		-4975 Jan 28 j 16:42	0°♈	
	-4981 Dec 30 j 19:41	0°♊		retrograde	-4975 Feb 23 j 09:19	3°♈40'41	
max. Earth dist.	-4980 Feb 02 j 05:30	25°♊21'40	2.41017 AU		-4975 Mar 20 j 02:40	30°♈	
	-4980 Feb 08 j 11:12	0°♈		opposition	-4975 Mar 27 j 13:51	27°♈48'51	2°58'20
morning rise	-4980 Feb 21 j 16:55	9°♈44'00		greatest brilliancy	-4975 Mar 28 j 21:07	27°♈24'51	-2.5m
	-4980 Mar 20 j 23:31	0°♊		min. Earth dist.	-4975 Apr 04 j 01:54	25°♈31'14	0.42741 AU
	-4980 May 03 j 20:23	0°♈		direct	-4975 May 01 j 11:42	20°♈50'59	
	-4980 Jun 19 j 13:45	0°♈		desc. node	-4975 May 12 j 03:03	21°♈37'37	
asc. node	-4980 Aug 08 j 05:08	29°♈14'17			-4975 Jun 09 j 06:17	0°♈	
	-4980 Aug 09 j 14:20	0°♈			-4975 Aug 01 j 10:45	0°♈	
	-4980 Oct 15 j 04:29	0°♈			-4975 Sep 14 j 01:38	0°♌	
retrograde	-4980 Nov 14 j 07:50	4°♈51'32			-4975 Oct 26 j 03:49	0°♊	
	-4980 Dec 11 j 21:33	30°♈			-4975 Dec 07 j 16:33	0°♈	
opposition	-4980 Dec 22 j 22:41	25°♈54'13	4°19'05		-4974 Jan 20 j 11:56	0°♊	
greatest brilliancy	-4980 Dec 23 j 15:21	25°♈37'52	-1.4m		-4974 Mar 06 j 18:42	0°♈	
min. Earth dist.	-4980 Dec 26 j 21:30	24°♈21'16	0.64361 AU	evening set	-4974 Mar 30 j 14:00	15°♈26'33	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 43

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

asc. node	-4974 Mar 30 j 19:45	15° K 35'49			-4969 May 15 j 03:56	0° \approx	
	-4974 Apr 22 j 05:47	0° Y			-4969 Jul 08 j 09:42	0° K	
				retrograde	-4969 Aug 22 j 22:48	11° K 25'01	
conjunction	-4974 May 17 j 23:52	16° Y 27'16	0°26'29	min. Earth dist.	-4969 Sep 26 j 14:14	3° K 29'51	0.60401 AU
minimum elong	-4974 May 17 j 22:57	16° Y 25'48	0°26'33	opposition	-4969 Oct 01 j 13:55	1° K 30'46	-2°-1'-26
max. Earth dist.	-4974 May 19 j 04:40	17° Y 13'12	2.66907 AU	greatest brilliancy	-4969 Oct 01 j 02:11	1° K 42'26	-1.6m
	-4974 Jun 08 j 05:25	0° B			-4969 Oct 05 j 10:27	30° $\text{R}\approx$	
morning rise	-4974 Jul 02 j 22:53	15° B 48'40		direct	-4969 Nov 08 j 00:33	22° \approx 47'31	
	-4974 Jul 25 j 00:50	0° II		asc. node	-4969 Nov 20 j 17:08	23° \approx 45'01	
	-4974 Sep 09 j 05:58	0° S			-4969 Dec 15 j 09:08	0° K	
	-4974 Oct 24 j 20:31	0° O			-4968 Feb 18 j 00:08	0° Y	
	-4974 Dec 09 j 06:23	0° M			-4968 Apr 10 j 04:47	0° B	
	-4973 Jan 24 j 12:42	0° A			-4968 May 28 j 07:05	0° II	
	-4973 Mar 16 j 17:08	0° M			-4968 Jul 12 j 09:25	0° S	
desc. node	-4973 Mar 30 j 06:07	6° M 30'09		evening set	-4968 Jul 27 j 12:49	10° S 29'38	
retrograde	-4973 May 13 j 02:44	17° M 34'13		max. Earth dist.	-4968 Aug 11 j 20:19	21° S 19'13	2.47576 AU
min. Earth dist.	-4973 Jun 09 j 18:31	13° M 04'00	0.38430 AU		-4968 Aug 23 j 21:45	0° O	
opposition	-4973 Jun 13 j 19:05	11° M 56'48	-5°-8'-57				
greatest brilliancy	-4973 Jun 12 j 18:44	12° M 13'47	-2.8m	conjunction	-4968 Sep 18 j 04:25	18° O 35'56	0°41'16
direct	-4973 Jul 13 j 17:55	6° M 51'06		minimum elong	-4968 Sep 18 j 06:29	18° O 39'49	0°41'26
	-4973 Sep 21 j 04:55	0° A			-4968 Oct 03 j 08:25	0° M	
	-4973 Nov 11 j 09:30	0° S			-4968 Nov 11 j 09:23	0° A	
	-4973 Dec 29 j 06:20	0° \approx		morning rise	-4968 Nov 15 j 10:23	3° A 08'39	
	-4972 Feb 14 j 19:26	0° K		desc. node	-4968 Nov 19 j 02:23	6° A 00'00	
asc. node	-4972 Feb 15 j 16:11	0° K 32'40			-4968 Dec 19 j 19:44	0° M	
	-4972 Apr 02 j 12:08	0° Y			-4967 Jan 27 j 12:02	0° A	
evening set	-4972 May 07 j 23:23	22° Y 23'10			-4967 Mar 08 j 07:52	0° S	
	-4972 May 19 j 23:05	0° B			-4967 Apr 19 j 07:05	0° \approx	
max. Earth dist.	-4972 Jun 10 j 22:32	14° B 03'45	2.65412 AU		-4967 Jun 03 j 19:31	0° K	
					-4967 Jul 27 j 03:18	0° Y	
conjunction	-4972 Jun 23 j 18:44	22° B 21'11	1°00'44	retrograde	-4967 Sep 26 j 19:19	17° Y 54'46	
minimum elong	-4972 Jun 23 j 17:33	22° B 19'16	1°00'56	asc. node	-4967 Oct 07 j 19:19	17° Y 05'38	
	-4972 Jul 05 j 12:48	0° II		min. Earth dist.	-4967 Nov 04 j 11:57	8° Y 36'12	0.66389 AU
morning rise	-4972 Aug 08 j 09:47	22° II 23'15		opposition	-4967 Nov 05 j 19:20	8° Y 04'36	1°05'31
	-4972 Aug 19 j 17:36	0° S		greatest brilliancy	-4967 Nov 05 j 16:52	8° Y 07'05	-1.3m
	-4972 Oct 02 j 09:32	0° O			-4967 Nov 30 j 09:37	30° RK	
	-4972 Nov 13 j 16:26	0° M		direct	-4967 Dec 15 j 17:11	28° K 28'35	
	-4972 Dec 24 j 23:03	0° A			-4966 Jan 01 j 00:45	0° Y	
	-4971 Feb 03 j 21:12	0° M			-4966 Mar 17 j 01:14	0° B	
desc. node	-4971 Feb 14 j 07:17	7° M 35'19			-4966 May 07 j 18:12	0° II	
	-4971 Mar 17 j 16:58	0° A			-4966 Jun 22 j 22:49	0° S	
	-4971 May 02 j 17:27	0° S			-4966 Aug 04 j 16:16	0° O	
retrograde	-4971 Jul 11 j 10:57	25° S 12'38			-4966 Sep 13 j 23:11	0° M	
min. Earth dist.	-4971 Aug 09 j 19:51	19° S 18'06	0.49191 AU	evening set	-4966 Sep 18 j 16:06	3° M 35'37	
greatest brilliancy	-4971 Aug 15 j 19:52	17° S 07'31	-2.1m	desc. node	-4966 Oct 06 j 22:58	17° M 41'58	
opposition	-4971 Aug 17 j 17:12	16° S 26'06	-5°-24'-20		-4966 Oct 22 j 17:19	0° A	
direct	-4971 Sep 20 j 09:55	9° S 17'21					
	-4971 Nov 27 j 07:09	0° \approx		conjunction	-4966 Nov 19 j 18:26	22° A 02'57	0°-31'00
asc. node	-4970 Jan 02 j 15:17	19° \approx 08'14		minimum elong	-4966 Nov 19 j 15:49	21° A 57'48	0°31'04
	-4970 Jan 21 j 19:35	0° K		max. Earth dist.	-4966 Nov 26 j 00:36	26° A 58'29	2.37683 AU
	-4970 Mar 13 j 13:02	0° Y			-4966 Nov 29 j 20:55	0° M	
	-4970 May 01 j 06:47	0° B			-4965 Jan 07 j 07:51	0° A	
evening set	-4970 Jun 15 j 18:27	29° B 04'17		morning rise	-4965 Jan 26 j 11:14	14° A 38'41	
	-4970 Jun 17 j 04:35	0° II			-4965 Feb 15 j 22:26	0° S	
max. Earth dist.	-4970 Jul 07 j 13:51	13° II 27'19	2.58687 AU		-4965 Mar 29 j 10:27	0° \approx	
	-4970 Aug 01 j 01:31	0° S			-4965 May 12 j 11:11	0° K	
					-4965 Jun 28 j 21:42	0° Y	
conjunction	-4970 Aug 02 j 14:25	1° S 03'12	1°10'50		-4965 Aug 21 j 20:58	0° B	
minimum elong	-4970 Aug 02 j 14:47	1° S 03'50	1°11'05	asc. node	-4965 Aug 25 j 19:56	1° B 55'44	
	-4970 Sep 12 j 20:59	0° O		retrograde	-4965 Oct 31 j 21:05	21° B 38'59	
morning rise	-4970 Sep 20 j 12:59	5° O 30'58		opposition	-4965 Dec 10 j 02:23	12° B 22'18	3°33'57
	-4970 Oct 23 j 21:46	0° M		greatest brilliancy	-4965 Dec 10 j 10:12	12° B 14'33	-1.3m
	-4970 Dec 02 j 15:43	0° A		min. Earth dist.	-4965 Dec 12 j 13:32	11° B 23'37	0.66171 AU
desc. node	-4969 Jan 02 j 05:18	23° A 25'05		direct	-4964 Jan 20 j 04:05	2° B 22'32	
	-4969 Jan 10 j 19:08	0° M			-4964 Apr 11 j 04:59	0° II	
	-4969 Feb 19 j 04:36	0° A			-4964 May 31 j 08:28	0° S	
	-4969 Mar 31 j 23:48	0° S			-4964 Jul 14 j 06:27	0° O	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 44

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

desc. node	-4964 Aug 23 j 19:20	29°♂54'33		behind sun end	-4959 May 03 j 13:59	2°♂51'40	
	-4964 Aug 23 j 22:13	0°♂		max. Earth dist.	-4959 May 09 j 19:23	6°♂51'09	2.66021 AU
	-4964 Oct 01 j 18:44	0°♂			-4959 Jun 15 j 01:48	0°♂	
	-4964 Nov 08 j 23:39	0°♂		morning rise	-4959 Jun 18 j 19:10	2°♂22'16	
evening set	-4964 Nov 23 j 16:05	11°♂29'46			-4959 Aug 01 j 03:53	0°♂	
	-4964 Dec 17 j 13:02	0°♂			-4959 Sep 17 j 02:22	0°♂	
					-4959 Nov 03 j 03:52	0°♂	
conjunction	-4963 Jan 26 j 13:09	0°♂10'59	-1°-8'-25		-4959 Dec 21 j 11:44	0°♂	
minimum elong	-4963 Jan 26 j 13:34	0°♂11'45	1°08'42		-4958 Feb 13 j 11:11	0°♂	
	-4963 Jan 26 j 07:12	0°♂		retrograde	-4958 Apr 12 j 08:10	16°♂39'23	
	-4963 Mar 08 j 21:25	0°♂		desc. node	-4958 Apr 15 j 22:12	16°♂34'30	
max. Earth dist.	-4963 Mar 11 j 09:18	1°♂45'08	2.48977 AU	opposition	-4958 May 12 j 18:57	11°♂36'05	-2°-2'-21
morning rise	-4963 Mar 27 j 19:36	13°♂09'39		greatest brilliancy	-4958 May 12 j 20:54	11°♂34'46	-2.9m
	-4963 Apr 21 j 16:03	0°♂		min. Earth dist.	-4958 May 14 j 03:25	11°♂14'28	0.37926 AU
	-4963 Jun 06 j 18:15	0°♂		direct	-4958 Jun 12 j 09:21	6°♂24'51	
asc. node	-4963 Jul 12 j 19:22	22°♂22'54			-4958 Aug 19 j 22:46	0°♂	
	-4963 Jul 25 j 11:33	0°♂			-4958 Oct 07 j 20:05	0°♂	
	-4963 Sep 16 j 22:38	0°♂			-4958 Nov 22 j 12:14	0°♂	
retrograde	-4963 Dec 09 j 03:23	27°♂24'57			-4957 Jan 07 j 03:07	0°♂	
opposition	-4962 Jan 15 j 11:45	19°♂06'14	5°09'21		-4957 Feb 22 j 12:27	0°♂	
greatest brilliancy	-4962 Jan 16 j 21:10	18°♂34'25	-1.6m	asc. node	-4957 Mar 04 j 07:42	6°♂16'24	
min. Earth dist.	-4962 Jan 21 j 16:23	16°♂45'05	0.59639 AU		-4957 Apr 10 j 14:29	0°♂	
direct	-4962 Feb 25 j 02:58	9°♂19'42		evening set	-4957 Apr 24 j 00:10	8°♂30'28	
	-4962 May 01 j 22:24	0°♂			-4957 May 27 j 19:16	0°♂	
	-4962 Jun 20 j 10:24	0°♂		max. Earth dist.	-4957 Jun 02 j 17:48	3°♂47'32	2.66630 AU
desc. node	-4962 Jul 11 j 18:40	14°♂44'07					
	-4962 Aug 01 j 20:36	0°♂		conjunction	-4957 Jun 10 j 03:29	8°♂31'50	0°49'40
	-4962 Sep 10 j 12:48	0°♂		minimum elong	-4957 Jun 10 j 02:11	8°♂29'44	0°49'49
	-4962 Oct 19 j 07:00	0°♂			-4957 Jul 13 j 09:48	0°♂	
	-4962 Nov 27 j 08:38	0°♂		morning rise	-4957 Jul 25 j 13:01	7°♂55'18	
	-4961 Jan 06 j 15:11	0°♂			-4957 Aug 27 j 21:47	0°♂	
evening set	-4961 Jan 25 j 10:53	13°♂35'43			-4957 Oct 11 j 03:32	0°♂	
	-4961 Feb 17 j 16:44	0°♂			-4957 Nov 23 j 06:56	0°♂	
					-4956 Jan 04 j 17:17	0°♂	
conjunction	-4961 Mar 21 j 23:49	22°♂07'15	0°-38'-15		-4956 Feb 16 j 06:47	0°♂	
minimum elong	-4961 Mar 22 j 01:29	22°♂10'03	0°38'26	desc. node	-4956 Mar 02 j 23:19	10°♂47'56	
	-4961 Apr 02 j 17:59	0°♂			-4956 Apr 01 j 05:58	0°♂	
max. Earth dist.	-4961 Apr 14 j 20:50	8°♂02'04	2.59983 AU		-4956 Jun 03 j 09:26	0°♂	
morning rise	-4961 May 12 j 11:21	26°♂02'47		retrograde	-4956 Jun 20 j 23:56	2°♂07'03	
	-4961 May 18 j 14:36	0°♂			-4956 Jul 08 j 03:21	30°♂	
asc. node	-4961 May 30 j 16:14	7°♂44'07		min. Earth dist.	-4956 Jul 18 j 08:33	27°♂05'00	0.44236 AU
	-4961 Jul 04 j 21:28	0°♂		greatest brilliancy	-4956 Jul 24 j 04:43	25°♂09'02	-2.4m
	-4961 Aug 22 j 12:06	0°♂		opposition	-4956 Jul 26 j 08:22	24°♂25'45	-6°-16'-19
	-4961 Oct 12 j 11:13	0°♂		direct	-4956 Aug 27 j 08:46	18°♂08'37	
	-4961 Dec 11 j 03:24	0°♂			-4956 Oct 14 j 01:40	0°♂	
retrograde	-4960 Jan 29 j 06:48	11°♂41'57			-4956 Dec 11 j 06:33	0°♂	
opposition	-4960 Mar 03 j 07:18	5°♂00'13	4°36'42	asc. node	-4955 Jan 19 j 06:45	22°♂53'33	
greatest brilliancy	-4960 Mar 05 j 07:10	4°♂19'56	-2.2m		-4955 Jan 31 j 02:34	0°♂	
min. Earth dist.	-4960 Mar 11 j 20:11	2°♂08'52	0.47766 AU		-4955 Mar 21 j 06:31	0°♂	
	-4960 Mar 18 j 21:54	30°♂			-4955 May 08 j 08:59	0°♂	
direct	-4960 Apr 09 j 17:39	26°♂48'55		evening set	-4955 May 31 j 11:54	14°♂43'07	
	-4960 May 01 j 22:27	0°♂			-4955 Jun 24 j 02:14	0°♂	
desc. node	-4960 May 28 j 20:47	10°♂30'13		max. Earth dist.	-4955 Jun 26 j 14:41	1°♂38'57	2.61917 AU
	-4960 Jul 02 j 02:15	0°♂					
	-4960 Aug 14 j 23:57	0°♂		conjunction	-4955 Jul 17 j 13:48	15°♂30'47	1°10'40
	-4960 Sep 24 j 22:12	0°♂		minimum elong	-4955 Jul 17 j 13:22	15°♂30'05	1°10'55
	-4960 Nov 04 j 12:54	0°♂			-4955 Aug 08 j 01:08	0°♂	
	-4960 Dec 16 j 01:32	0°♂		morning rise	-4955 Sep 02 j 15:54	17°♂41'00	
	-4959 Jan 28 j 03:34	0°♂			-4955 Sep 20 j 03:10	0°♂	
	-4959 Mar 13 j 22:33	0°♂			-4955 Oct 31 j 13:26	0°♂	
evening set	-4959 Mar 14 j 03:33	0°♂08'13			-4955 Dec 10 j 18:22	0°♂	
asc. node	-4959 Apr 16 j 11:10	21°♂50'44		desc. node	-4954 Jan 18 j 23:21	29°♂41'14	
	-4959 Apr 29 j 03:02	0°♂			-4954 Jan 19 j 09:15	0°♂	
					-4954 Feb 28 j 08:07	0°♂	
conjunction	-4959 May 02 j 21:58	2°♂25'59	0°09'19		-4954 Apr 11 j 01:45	0°♂	
minimum elong	-4959 May 02 j 21:36	2°♂25'24	0°09'18		-4954 May 27 j 22:28	0°♂	
behind sun begin	-4959 May 02 j 05:14	1°♂59'09		retrograde	-4954 Aug 07 j 15:39	25°♂20'01	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 45

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

min. Earth dist.	-4954 Sep 09 j 09:06	18° 07 '11	0.56531 AU		-4949 Sep 01 j 16:23	0° 00 '	
opposition	-4954 Sep 15 j 16:58	15° 39 '05	-3°-21'-55	desc. node	-4949 Sep 10 j 14:41	6° 00 '49'34	
greatest brilliancy	-4954 Sep 14 j 16:57	16° 02 '31	-1.8m		-4949 Oct 10 j 10:45	0° 00 '	
direct	-4954 Oct 21 j 19:57	7° 26 '32		evening set	-4949 Oct 28 j 12:47	14° 00 '12'54	
asc. node	-4954 Dec 07 j 07:29	18° 08 '44			-4949 Nov 17 j 13:51	0° 00 '	
	-4953 Jan 02 j 20:57	0° 00 '			-4949 Dec 26 j 00:56	0° 00 '	
	-4953 Feb 27 j 14:25	0° 00 '					
	-4953 Apr 18 j 23:53	0° 00 '		conjunction	-4948 Jan 01 j 20:49	5° 00 '14'52	-1°-4'-6
	-4953 Jun 05 j 12:00	0° 00 '		minimum elong	-4948 Jan 01 j 18:42	5° 00 '10'49	1°04'20
evening set	-4953 Jul 11 j 01:51	23° 00 '36'14			-4948 Feb 03 j 16:19	0° 00 '	
	-4953 Jul 20 j 10:57	0° 00 '		max. Earth dist.	-4948 Feb 19 j 13:15	11° 00 '39'29	2.43787 AU
max. Earth dist.	-4953 Jul 27 j 17:55	5° 00 '01'26	2.52329 AU	morning rise	-4948 Mar 06 j 06:52	22° 00 '35'39	
					-4948 Mar 16 j 03:58	0° 00 '	
conjunction	-4953 Aug 30 j 06:25	28° 00 '42'41	0°58'32		-4948 Apr 28 j 22:35	0° 00 '	
minimum elong	-4953 Aug 30 j 08:09	28° 00 '45'48	0°58'46		-4948 Jun 14 j 07:59	0° 00 '	
	-4953 Sep 01 j 01:16	0° 00 '		asc. node	-4948 Jul 29 j 10:29	27° 00 '14'16	
	-4953 Oct 11 j 16:35	0° 00 '			-4948 Aug 03 j 05:50	0° 00 '	
morning rise	-4953 Oct 23 j 01:07	8° 00 '35'25			-4948 Oct 01 j 01:44	0° 00 '	
	-4953 Nov 19 j 23:11	0° 00 '		retrograde	-4948 Nov 23 j 00:00	13° 00 '11'07'47	
desc. node	-4953 Dec 06 j 20:31	13° 00 '05'12		opposition	-4948 Dec 31 j 05:40	4° 00 '11'22'49	4°40'46
	-4953 Dec 28 j 14:45	0° 00 '		greatest brilliancy	-4947 Jan 01 j 04:00	4° 00 '11'01'06	-1.4m
	-4952 Feb 05 j 11:40	0° 00 '		min. Earth dist.	-4947 Jan 04 j 23:51	2° 00 '11'31'57	0.62953 AU
	-4952 Mar 16 j 12:49	0° 00 '			-4947 Jan 11 j 19:39	30° 00 '00'00'00	
	-4952 Apr 27 j 23:01	0° 00 '		direct	-4947 Feb 10 j 06:59	24° 00 '08'25'02	
	-4952 Jun 13 j 22:57	0° 00 '			-4947 Mar 14 j 01:38	0° 00 '	
	-4952 Aug 16 j 08:39	0° 00 '			-4947 May 15 j 01:41	0° 00 '	
retrograde	-4952 Sep 13 j 05:33	4° 00 '31'24			-4947 Jun 30 j 05:19	0° 00 '	
	-4952 Oct 09 j 01:35	30° 00 '00'00		desc. node	-4947 Jul 28 j 12:50	20° 00 '15'16	
min. Earth dist.	-4952 Oct 20 j 11:36	25° 00 '41'54	0.64772 AU		-4947 Aug 10 j 16:05	0° 00 '	
opposition	-4952 Oct 23 j 06:13	24° 00 '34'52	0°-2'-37		-4947 Sep 18 j 21:36	0° 00 '	
greatest brilliancy	-4952 Oct 23 j 06:00	24° 00 '35'04	-1.4m		-4947 Oct 27 j 08:26	0° 00 '	
asc. node	-4952 Oct 24 j 09:15	24° 00 '07'43			-4947 Dec 05 j 03:18	0° 00 '	
direct	-4952 Dec 01 j 08:51	15° 00 '15'38		evening set	-4946 Jan 02 j 17:39	21° 00 '00'34'24	
	-4951 Jan 27 j 08:44	0° 00 '			-4946 Jan 14 j 03:11	0° 00 '	
	-4951 Mar 27 j 00:11	0° 00 '			-4946 Feb 24 j 22:27	0° 00 '	
	-4951 May 15 j 19:17	0° 00 '					
	-4951 Jun 30 j 10:27	0° 00 '		conjunction	-4946 Mar 02 j 14:32	3° 00 '57'31	0°-54'-21
	-4951 Aug 12 j 00:33	0° 00 '		minimum elong	-4946 Mar 02 j 16:35	4° 00 '01'05	0°54'34
evening set	-4951 Aug 27 j 06:19	11° 00 '01'02'26		max. Earth dist.	-4946 Apr 03 j 07:35	25° 00 '38'58	2.56184 AU
max. Earth dist.	-4951 Sep 20 j 20:47	29° 00 '08'38'44	2.40151 AU		-4946 Apr 09 j 19:20	0° 00 '	
	-4951 Sep 21 j 07:58	0° 00 '		morning rise	-4946 Apr 26 j 00:34	10° 00 '00'45'16	
desc. node	-4951 Oct 23 j 16:53	24° 00 '00'57'28			-4946 May 25 j 15:40	0° 00 '	
				asc. node	-4946 Jun 16 j 08:04	13° 00 '00'47'35	
conjunction	-4951 Oct 24 j 10:08	25° 00 '00'31'03	0°00'-31		-4946 Jul 12 j 07:05	0° 00 '	
minimum elong	-4951 Oct 24 j 10:03	25° 00 '00'30'55	0°00'30		-4946 Aug 31 j 02:02	0° 00 '	
behind sun begin	-4951 Oct 23 j 07:56	24° 00 '00'40'02			-4946 Oct 24 j 22:21	0° 00 '	
behind sun end	-4951 Oct 25 j 12:11	26° 00 '00'21'50		retrograde	-4945 Jan 07 j 05:17	23° 00 '00'01'17	
	-4951 Oct 30 j 03:55	0° 00 '		opposition	-4945 Feb 11 j 18:31	15° 00 '00'35'37	5°15'31
	-4951 Dec 07 j 09:10	0° 00 '		greatest brilliancy	-4945 Feb 13 j 18:05	14° 00 '00'52'54	-1.9m
morning rise	-4951 Dec 29 j 01:10	16° 00 '00'57'14		min. Earth dist.	-4945 Feb 19 j 20:03	12° 00 '00'42'52	0.52853 AU
	-4950 Jan 14 j 21:07	0° 00 '		direct	-4945 Mar 22 j 22:21	6° 00 '00'32'39	
	-4950 Feb 23 j 12:18	0° 00 '			-4945 May 30 j 14:31	0° 00 '	
	-4950 Apr 06 j 02:00	0° 00 '		desc. node	-4945 Jun 15 j 12:40	9° 00 '00'30'36	
	-4950 May 20 j 10:28	0° 00 '			-4945 Jul 16 j 09:16	0° 00 '	
	-4950 Jul 08 j 02:03	0° 00 '			-4945 Aug 26 j 16:39	0° 00 '	
	-4950 Sep 06 j 19:15	0° 00 '			-4945 Oct 05 j 09:29	0° 00 '	
asc. node	-4950 Sep 11 j 10:58	1° 00 '00'40'32			-4945 Nov 14 j 04:17	0° 00 '	
retrograde	-4950 Oct 18 j 00:57	8° 00 '00'43'56			-4945 Dec 25 j 01:28	0° 00 '	
	-4950 Nov 24 j 16:06	30° 00 '00'00'00			-4944 Feb 05 j 15:05	0° 00 '	
opposition	-4950 Nov 26 j 16:44	29° 00 '00'11'27	2°41'23	evening set	-4944 Feb 25 j 11:11	13° 00 '00'32'56	
greatest brilliancy	-4950 Nov 26 j 18:04	29° 00 '00'10'07	-1.3m		-4944 Mar 21 j 01:01	0° 00 '	
min. Earth dist.	-4950 Nov 27 j 16:04	28° 00 '00'48'07	0.67027 AU				
direct	-4949 Jan 06 j 11:45	19° 00 '00'17'38		conjunction	-4944 Apr 17 j 01:42	17° 00 '00'44'12	0°-9'-11
	-4949 Feb 22 j 10:35	0° 00 '		minimum elong	-4944 Apr 17 j 02:05	17° 00 '00'44'50	0°09'17
	-4949 Apr 22 j 23:39	0° 00 '		behind sun begin	-4944 Apr 16 j 09:09	17° 00 '00'44'19	
	-4949 Jun 09 j 22:50	0° 00 '		behind sun end	-4944 Apr 17 j 19:01	18° 00 '00'44'22	
	-4949 Jul 23 j 05:48	0° 00 '		max. Earth dist.	-4944 Apr 30 j 03:51	26° 00 '00'44'14	2.64275 AU

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 46

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

asc. node	-4944 May 03 j 04:40	28° Υ 10'42		min. Earth dist.	-4939 Aug 21 j 11:33	0° \approx 45'07	0.51948 AU
	-4944 May 06 j 00:32	0° Υ			-4939 Aug 23 j 12:09	30° \Re \mathfrak{Z}	
morning rise	-4944 Jun 04 j 08:30	18° Υ 46'40		greatest brilliancy	-4939 Aug 27 j 08:14	28° \mathfrak{Z} 33'07	-2.0m
	-4944 Jun 22 j 00:18	0° \mathfrak{Z}		opposition	-4939 Aug 28 j 22:22	27° \mathfrak{Z} 57'12	-4°-42'-24
	-4944 Aug 08 j 12:22	0° Π		direct	-4939 Oct 02 j 12:29	20° \mathfrak{Z} 23'17	
	-4944 Sep 25 j 12:05	0° \mathfrak{S}			-4939 Nov 14 j 17:18	0° \approx	
	-4944 Nov 13 j 22:46	0° Ω		asc. node	-4939 Dec 23 j 22:20	18° \approx 05'29	
	-4943 Jan 08 j 00:12	0° \mathfrak{M}			-4938 Jan 15 j 03:58	0° \mathfrak{H}	
retrograde	-4943 Mar 11 j 17:13	18° \mathfrak{M} 13'40			-4938 Mar 08 j 05:05	0° Υ	
opposition	-4943 Apr 12 j 02:14	12° \mathfrak{M} 46'57	1°27'37		-4938 Apr 26 j 11:02	0° \mathfrak{Z}	
greatest brilliancy	-4943 Apr 12 j 15:57	12° \mathfrak{M} 37'00	-2.7m		-4938 Jun 12 j 13:51	0° Π	
min. Earth dist.	-4943 Apr 18 j 01:09	11° \mathfrak{M} 03'49	0.40417 AU	evening set	-4938 Jun 24 j 17:10	7° Π 57'47	
desc. node	-4943 May 02 j 14:43	7° \mathfrak{M} 39'00		max. Earth dist.	-4938 Jul 14 j 08:27	21° Π 04'06	2.56615 AU
direct	-4943 May 15 j 07:27	6° \mathfrak{M} 33'28			-4938 Jul 27 j 11:47	0° \mathfrak{S}	
	-4943 Jul 21 j 05:40	0° \mathfrak{L}					
	-4943 Sep 06 j 07:01	0° \mathfrak{M}		conjunction	-4938 Aug 12 j 04:35	10° \mathfrak{S} 50'59	1°08'17
	-4943 Oct 19 j 18:03	0° \mathfrak{Z}		minimum elong	-4938 Aug 12 j 05:28	10° \mathfrak{S} 52'32	1°08'33
	-4943 Dec 02 j 01:37	0° \mathfrak{Z}			-4938 Sep 08 j 05:46	0° Ω	
	-4942 Jan 15 j 08:40	0° \approx		morning rise	-4938 Oct 01 j 13:24	16° Ω 57'42	
	-4942 Mar 01 j 23:01	0° \mathfrak{H}			-4938 Oct 19 j 03:06	0° \mathfrak{M}	
asc. node	-4942 Mar 21 j 00:34	12° \mathfrak{H} 19'28			-4938 Nov 27 j 16:40	0° \mathfrak{L}	
evening set	-4942 Apr 08 j 15:21	24° \mathfrak{H} 16'26		desc. node	-4938 Dec 23 j 15:46	19° \mathfrak{L} 59'24	
	-4942 Apr 17 j 14:19	0° Υ			-4937 Jan 05 j 14:59	0° \mathfrak{M}	
max. Earth dist.	-4942 May 24 j 13:27	23° Υ 34'22	2.67033 AU		-4937 Feb 13 j 18:27	0° \mathfrak{Z}	
					-4937 Mar 26 j 04:37	0° \mathfrak{Z}	
conjunction	-4942 May 26 j 11:51	24° Υ 48'22	0°35'41		-4937 May 08 j 11:03	0° \approx	
minimum elong	-4942 May 26 j 10:42	24° Υ 46'32	0°35'46		-4937 Jun 27 j 13:37	0° \mathfrak{H}	
	-4942 Jun 03 j 15:09	0° \mathfrak{Z}		retrograde	-4937 Aug 31 j 06:27	20° \mathfrak{H} 25'10	
morning rise	-4942 Jul 11 j 03:18	24° \mathfrak{Z} 03'05		min. Earth dist.	-4937 Oct 05 j 21:58	12° \mathfrak{H} 09'11	0.62221 AU
	-4942 Jul 20 j 08:21	0° Π		opposition	-4937 Oct 10 j 03:11	10° \mathfrak{H} 27'55	-1°-16'-20
	-4942 Sep 04 j 06:25	0° \mathfrak{S}		greatest brilliancy	-4937 Oct 09 j 20:51	10° \mathfrak{H} 34'15	-1.5m
	-4942 Oct 19 j 07:25	0° Ω		asc. node	-4937 Nov 10 j 23:33	1° \mathfrak{H} 45'22	
	-4942 Dec 02 j 17:19	0° \mathfrak{M}		direct	-4937 Nov 17 j 05:53	1° \mathfrak{H} 30'15	
	-4941 Jan 16 j 03:09	0° \mathfrak{L}			-4936 Feb 10 j 22:09	0° Υ	
	-4941 Mar 03 j 07:30	0° \mathfrak{M}			-4936 Apr 04 j 18:49	0° \mathfrak{Z}	
desc. node	-4941 Mar 20 j 16:36	10° \mathfrak{M} 22'43			-4936 May 23 j 10:06	0° Π	
	-4941 May 01 j 06:50	0° \mathfrak{Z}			-4936 Jul 07 j 17:03	0° \mathfrak{S}	
retrograde	-4941 May 28 j 17:23	4° \mathfrak{Z} 50'35		evening set	-4936 Aug 07 j 02:29	21° \mathfrak{S} 14'45	
min. Earth dist.	-4941 Jun 24 j 10:50	0° \mathfrak{Z} 22'21	0.39985 AU		-4936 Aug 19 j 06:33	0° Ω	
	-4941 Jun 25 j 17:34	30° \Re \mathfrak{M}		max. Earth dist.	-4936 Aug 23 j 01:26	2° Ω 45'09	2.44873 AU
greatest brilliancy	-4941 Jun 28 j 23:39	29° \mathfrak{M} 02'21	-2.7m		-4936 Sep 28 j 16:25	0° \mathfrak{M}	
opposition	-4941 Jun 30 j 16:03	28° \mathfrak{M} 32'28	-6°-4'-24				
direct	-4941 Jul 31 j 00:18	23° \mathfrak{M} 07'25		conjunction	-4936 Sep 30 j 11:10	1° \mathfrak{M} 21'06	0°27'58
	-4941 Sep 03 j 15:59	0° \mathfrak{Z}		minimum elong	-4936 Sep 30 j 12:56	1° \mathfrak{M} 24'27	0°28'06
	-4941 Nov 03 j 04:14	0° \mathfrak{Z}			-4936 Nov 06 j 15:49	0° \mathfrak{L}	
	-4941 Dec 23 j 03:08	0° \approx		desc. node	-4936 Nov 09 j 12:44	2° \mathfrak{L} 14'17	
asc. node	-4940 Feb 05 j 22:10	27° \approx 44'12		morning rise	-4936 Nov 30 j 11:43	18° \mathfrak{L} 37'41	
	-4940 Feb 09 j 13:30	0° \mathfrak{H}			-4936 Dec 15 j 00:06	0° \mathfrak{M}	
	-4940 Mar 28 j 16:32	0° Υ			-4935 Jan 22 j 14:04	0° \mathfrak{Z}	
	-4940 May 15 j 08:19	0° \mathfrak{Z}			-4935 Mar 03 j 06:59	0° \mathfrak{Z}	
evening set	-4940 May 16 j 12:09	0° \mathfrak{Z} 44'12			-4935 Apr 14 j 00:32	0° \approx	
max. Earth dist.	-4940 Jun 16 j 12:19	20° \mathfrak{Z} 36'18	2.64381 AU		-4935 May 28 j 22:26	0° \mathfrak{H}	
	-4940 Jun 30 j 23:16	0° Π			-4935 Jul 18 j 18:54	0° Υ	
				asc. node	-4935 Sep 28 j 00:45	25° Υ 35'28	
conjunction	-4940 Jul 02 j 07:11	0° Π 52'09	1°05'34	retrograde	-4935 Oct 04 j 12:52	25° Υ 51'33	
minimum elong	-4940 Jul 02 j 06:11	0° Π 50'33	1°05'48	opposition	-4935 Nov 13 j 11:26	16° Υ 06'36	1°42'36
	-4940 Aug 15 j 01:48	0° \mathfrak{S}		greatest brilliancy	-4935 Nov 13 j 09:18	16° Υ 08'44	-1.3m
morning rise	-4940 Aug 17 j 06:55	1° \mathfrak{S} 30'03		min. Earth dist.	-4935 Nov 12 j 23:24	16° Υ 18'41	0.66888 AU
	-4940 Sep 27 j 12:27	0° Ω		direct	-4935 Dec 23 j 18:34	6° Υ 23'02	
	-4940 Nov 08 j 11:02	0° \mathfrak{M}			-4934 Mar 09 j 13:56	0° \mathfrak{Z}	
	-4940 Dec 19 j 07:02	0° \mathfrak{L}			-4934 May 02 j 04:52	0° Π	
	-4939 Jan 28 j 15:13	0° \mathfrak{M}			-4934 Jun 17 j 22:38	0° \mathfrak{S}	
desc. node	-4939 Feb 04 j 16:11	5° \mathfrak{M} 13'17			-4934 Jul 30 j 20:50	0° Ω	
	-4939 Mar 10 j 13:15	0° \mathfrak{Z}			-4934 Sep 09 j 05:08	0° \mathfrak{M}	
	-4939 Apr 23 j 05:33	0° \mathfrak{Z}		desc. node	-4934 Sep 27 j 08:30	13° \mathfrak{M} 55'55	
	-4939 Jun 17 j 23:20	0° \approx		evening set	-4934 Oct 02 j 10:23	17° \mathfrak{M} 52'13	
retrograde	-4939 Jul 21 j 20:39	7° \approx 09'06			-4934 Oct 17 j 23:28	0° \mathfrak{L}	

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-4934 Nov 25 j 02:43	0°♄				-4929 Nov 28 j 18:21	0°♂	
				retrograde		-4928 Feb 12 j 13:21	24°♂07'33	
conjunction	-4934 Dec 05 j 07:34	8°♄00'53	0°-46'-11	opposition		-4928 Mar 16 j 12:57	17°♂53'14	3°49'11
minimum elong	-4934 Dec 05 j 04:14	7°♄54'21	0°46'18	greatest brilliancy		-4928 Mar 18 j 05:54	17°♂20'20	-2.4m
	-4933 Jan 02 j 13:14	0°♂		min. Earth dist.		-4928 Mar 24 j 17:26	15°♂16'13	0.44914 AU
max. Earth dist.	-4933 Jan 13 j 14:54	8°♂30'05	2.39037 AU	direct		-4928 Apr 21 j 16:16	10°♂20'13	
morning rise	-4933 Feb 10 j 15:34	29°♂38'06		desc. node		-4928 May 19 j 06:21	15°♂12'14	
	-4933 Feb 11 j 03:22	0°♂				-4928 Jun 20 j 20:41	0°♄	
	-4933 Mar 24 j 13:59	0°♂				-4928 Aug 07 j 06:49	0°♂	
	-4933 May 07 j 10:37	0°♂				-4928 Sep 18 j 11:17	0°♄	
	-4933 Jun 23 j 08:14	0°♂				-4928 Oct 29 j 18:46	0°♂	
	-4933 Aug 14 j 06:12	0°♂				-4928 Dec 10 j 18:50	0°♂	
asc. node	-4933 Aug 16 j 01:54	0°♂57'55				-4927 Jan 23 j 04:42	0°♂	
retrograde	-4933 Nov 09 j 01:26	29°♂37'37				-4927 Mar 09 j 04:57	0°♂	
opposition	-4933 Dec 17 j 23:40	20°♂31'03	4°00'57	evening set		-4927 Mar 23 j 15:54	9°♂26'29	
greatest brilliancy	-4933 Dec 18 j 12:06	20°♂18'48	-1.3m	asc. node		-4927 Apr 06 j 17:01	18°♂32'34	
min. Earth dist.	-4933 Dec 21 j 06:26	19°♂13'27	0.65302 AU			-4927 Apr 24 j 12:10	0°♂	
direct	-4932 Jan 28 j 03:23	10°♂30'13						
	-4932 Apr 02 j 21:31	0°♂		conjunction		-4927 May 11 j 14:58	10°♂57'31	0°19'28
	-4932 May 25 j 10:27	0°♂		minimum elong		-4927 May 11 j 14:14	10°♂56'22	0°19'29
	-4932 Jul 09 j 00:01	0°♂		max. Earth dist.		-4927 May 15 j 06:43	13°♂17'42	2.66617 AU
desc. node	-4932 Aug 14 j 05:54	26°♂29'38				-4927 Jun 10 j 11:07	0°♂	
	-4932 Aug 18 j 21:35	0°♄		morning rise		-4927 Jun 26 j 22:36	10°♂30'52	
	-4932 Sep 26 j 20:50	0°♂				-4927 Jul 27 j 09:25	0°♂	
	-4932 Nov 04 j 03:10	0°♄				-4927 Sep 11 j 21:48	0°♂	
evening set	-4932 Dec 08 j 16:01	26°♄52'26				-4927 Oct 28 j 02:22	0°♂	
	-4932 Dec 12 j 17:36	0°♂				-4927 Dec 13 j 13:27	0°♄	
	-4931 Jan 21 j 12:52	0°♂				-4926 Jan 31 j 01:20	0°♂	
						-4926 Apr 03 j 01:37	0°♄	
conjunction	-4931 Feb 08 j 22:49	13°♂27'18	-1°-5'-35	desc. node		-4926 Apr 06 j 08:44	0°♄57'50	
minimum elong	-4931 Feb 09 j 00:15	13°♂29'54	1°05'52	retrograde		-4926 Apr 30 j 02:03	4°♄26'19	
	-4931 Mar 04 j 03:46	0°♂				-4926 May 27 j 23:33	30°♄	
max. Earth dist.	-4931 Mar 20 j 16:12	11°♂30'01	2.51714 AU	min. Earth dist.		-4926 May 29 j 05:04	29°♂40'15	0.37798 AU
morning rise	-4931 Apr 07 j 23:25	23°♂59'28		opposition		-4926 May 30 j 22:57	29°♂12'03	-3°-59'-20
	-4931 Apr 16 j 22:02	0°♂		greatest brilliancy		-4926 May 30 j 12:57	29°♂18'48	-2.9m
	-4931 Jun 01 j 20:28	0°♂		direct		-4926 Jun 29 j 23:27	24°♂11'38	
asc. node	-4931 Jul 03 j 01:00	19°♂35'20				-4926 Jul 31 j 00:15	0°♄	
	-4931 Jul 20 j 01:25	0°♂				-4926 Sep 28 j 16:38	0°♂	
	-4931 Sep 09 j 17:39	0°♂				-4926 Nov 15 j 19:05	0°♂	
	-4931 Nov 13 j 10:30	0°♂				-4925 Jan 01 j 12:14	0°♂	
retrograde	-4931 Dec 19 j 01:58	6°♂34'09				-4925 Feb 17 j 11:30	0°♂	
	-4930 Jan 20 j 21:44	30°♄		asc. node		-4925 Feb 22 j 13:38	3°♂13'53	
opposition	-4930 Jan 24 j 20:56	28°♂32'20	5°18'05			-4925 Apr 05 j 20:55	0°♂	
greatest brilliancy	-4930 Jan 26 j 12:11	27°♂55'36	-1.7m	evening set		-4925 May 02 j 15:07	16°♂55'31	
min. Earth dist.	-4930 Jan 31 j 19:34	25°♂56'58	0.57444 AU			-4925 May 23 j 05:06	0°♂	
direct	-4930 Mar 06 j 03:18	18°♂57'11		max. Earth dist.		-4925 Jun 08 j 04:13	10°♂12'07	2.66062 AU
	-4930 Apr 20 j 08:42	0°♂						
	-4930 Jun 13 j 11:58	0°♂		conjunction		-4925 Jun 18 j 12:28	16°♂51'01	0°56'28
desc. node	-4930 Jul 02 j 05:49	12°♂30'06		minimum elong		-4925 Jun 18 j 11:12	16°♂48'58	0°56'39
	-4930 Jul 26 j 23:00	0°♄				-4925 Jul 08 j 19:36	0°♂	
	-4930 Sep 05 j 01:54	0°♂		morning rise		-4925 Aug 02 j 23:23	16°♂31'33	
	-4930 Oct 14 j 02:16	0°♄				-4925 Aug 23 j 04:06	0°♂	
	-4930 Nov 22 j 08:15	0°♂				-4925 Oct 06 j 02:43	0°♂	
	-4929 Jan 01 j 18:26	0°♂				-4925 Nov 17 j 18:34	0°♄	
evening set	-4929 Feb 06 j 05:44	25°♂19'08				-4925 Dec 29 j 12:36	0°♂	
	-4929 Feb 12 j 22:45	0°♂				-4924 Feb 09 j 01:02	0°♄	
	-4929 Mar 29 j 01:52	0°♂		desc. node		-4924 Feb 22 j 10:44	9°♄34'22	
						-4924 Mar 22 j 20:22	0°♂	
conjunction	-4929 Apr 01 j 05:10	2°♂05'09	0°-27'-51			-4924 May 10 j 22:36	0°♂	
minimum elong	-4929 Apr 01 j 06:24	2°♂07'12	0°28'00	retrograde		-4924 Jul 02 j 23:45	16°♂05'46	
max. Earth dist.	-4929 Apr 21 j 03:37	15°♂13'10	2.61731 AU	min. Earth dist.		-4924 Jul 31 j 10:15	10°♂35'18	0.46933 AU
	-4929 May 13 j 22:23	0°♂		greatest brilliancy		-4924 Aug 06 j 10:26	8°♂29'01	-2.2m
asc. node	-4929 May 20 j 21:01	4°♂27'45		opposition		-4924 Aug 08 j 12:04	7°♂45'08	-5°-51'-42
morning rise	-4929 May 21 j 09:31	4°♂47'47		direct		-4924 Sep 10 j 10:18	0°♂58'47	
	-4929 Jun 30 j 01:36	0°♂				-4924 Dec 03 j 02:06	0°♂	
	-4929 Aug 17 j 04:19	0°♂		asc. node		-4923 Jan 09 j 12:16	20°♂51'21	
	-4929 Oct 05 j 18:16	0°♂				-4923 Jan 25 j 04:33	0°♂	

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-4923 Mar 16 j 04:17	0°♈			-4919 Dec 02 j 15:19	0°♍		
	-4923 May 03 j 15:33	0°♉			-4918 Jan 10 j 01:59	0°♈		
evening set	-4923 Jun 09 j 04:45	23°♉18'04		morning rise	-4918 Jan 14 j 04:53	3°♈10'31		
	-4923 Jun 19 j 12:08	0°♊			-4918 Feb 18 j 15:43	0°♉		
max. Earth dist.	-4923 Jul 02 j 19:01	8°♊43'54	2.60229 AU		-4918 Apr 01 j 02:52	0°♊		
					-4918 May 15 j 04:39	0°♋		
conjunction	-4923 Jul 26 j 14:44	24°♊40'14	1°11'25		-4918 Jul 01 j 23:23	0°♈		
minimum elong	-4923 Jul 26 j 14:44	24°♊40'15	1°11'41		-4918 Aug 26 j 18:54	0°♉		
	-4923 Aug 03 j 10:49	0°♊		asc. node	-4918 Sep 01 j 16:53	2°♉38'58		
morning rise	-4923 Sep 12 j 14:47	27°♊59'59		retrograde	-4918 Oct 25 j 22:16	16°♉34'37		
	-4923 Sep 15 j 10:10	0°♋		opposition	-4918 Dec 04 j 09:16	7°♉10'26	3°12'41	
	-4923 Oct 26 j 15:43	0°♌		greatest brilliancy	-4918 Dec 04 j 13:53	7°♉05'51	-1.3m	
	-4923 Dec 05 j 14:52	0°♌		min. Earth dist.	-4918 Dec 06 j 04:25	6°♉27'30	0.66676 AU	
desc. node	-4922 Jan 09 j 09:25	26°♌30'35			-4918 Dec 24 j 16:10	30°♈		
	-4922 Jan 13 j 23:07	0°♍		direct	-4917 Jan 14 j 09:13	27°♈12'51		
	-4922 Feb 22 j 13:16	0°♈			-4917 Feb 05 j 15:47	0°♉		
	-4922 Apr 04 j 15:32	0°♉			-4917 Apr 16 j 07:27	0°♊		
	-4922 May 19 j 14:05	0°♊			-4917 Jun 04 j 11:48	0°♊		
	-4922 Jul 18 j 13:12	0°♋			-4917 Jul 18 j 04:29	0°♋		
retrograde	-4922 Aug 16 j 13:10	5°♋08'54			-4917 Aug 27 j 18:50	0°♌		
	-4922 Sep 12 j 19:12	30°♈		desc. node	-4917 Aug 31 j 23:45	3°♌11'57		
min. Earth dist.	-4922 Sep 19 j 08:45	27°♈32'14	0.58760 AU		-4917 Oct 05 j 14:57	0°♌		
opposition	-4922 Sep 24 j 23:32	25°♈19'13	-2°-35'-9	evening set	-4917 Nov 12 j 19:53	0°♍01'38		
greatest brilliancy	-4922 Sep 24 j 06:53	25°♈35'39	-1.7m		-4917 Nov 12 j 19:03	0°♍		
direct	-4922 Oct 31 j 21:10	16°♈48'52			-4917 Dec 21 j 06:45	0°♈		
asc. node	-4922 Nov 27 j 13:27	20°♈46'07						
	-4922 Dec 23 j 15:59	0°♉		conjunction	-4916 Jan 16 j 15:52	20°♈05'07	-1°-8'-7	
	-4921 Feb 21 j 11:30	0°♈		minimum elong	-4916 Jan 16 j 15:13	20°♈03'55	1°08'22	
	-4921 Apr 13 j 20:59	0°♉			-4916 Jan 29 j 22:39	0°♉		
	-4921 May 31 j 18:07	0°♊		max. Earth dist.	-4916 Mar 03 j 11:26	24°♉21'53	2.46669 AU	
	-4921 Jul 15 j 20:07	0°♊			-4916 Mar 11 j 10:18	0°♊		
evening set	-4921 Jul 20 j 20:36	3°♊27'01		morning rise	-4916 Mar 18 j 19:51	5°♊11'33		
max. Earth dist.	-4921 Aug 05 j 08:30	14°♊14'42	2.49757 AU		-4916 Apr 24 j 03:14	0°♋		
	-4921 Aug 27 j 10:34	0°♋			-4916 Jun 09 j 06:37	0°♈		
				asc. node	-4916 Jul 19 j 16:34	24°♈51'40		
conjunction	-4921 Sep 10 j 07:03	10°♋06'00	0°49'38		-4916 Jul 28 j 08:59	0°♉		
minimum elong	-4921 Sep 10 j 09:04	10°♋09'43	0°49'49		-4916 Sep 21 j 10:47	0°♊		
	-4921 Oct 07 j 00:01	0°♌		retrograde	-4916 Dec 02 j 00:29	21°♊36'59		
morning rise	-4921 Nov 05 j 10:11	22°♌28'14		opposition	-4915 Jan 08 j 19:32	13°♊05'48	4°58'33	
	-4921 Nov 15 j 03:53	0°♍		greatest brilliancy	-4915 Jan 09 j 23:58	12°♊38'28	-1.5m	
desc. node	-4921 Nov 27 j 06:32	9°♍24'25		min. Earth dist.	-4915 Jan 14 j 09:26	10°♊57'22	0.61240 AU	
	-4921 Dec 23 j 16:29	0°♍		direct	-4915 Feb 18 j 16:56	3°♊13'02		
	-4920 Jan 31 j 10:07	0°♈			-4915 May 07 j 08:51	0°♊		
	-4920 Mar 11 j 07:02	0°♉			-4915 Jun 24 j 05:27	0°♋		
	-4920 Apr 22 j 08:42	0°♊		desc. node	-4915 Jul 18 j 22:24	17°♋20'35		
	-4920 Jun 07 j 07:09	0°♋			-4915 Aug 05 j 05:13	0°♌		
	-4920 Aug 02 j 00:36	0°♈			-4915 Sep 13 j 16:43	0°♌		
retrograde	-4920 Sep 21 j 01:19	12°♈42'41			-4915 Oct 22 j 07:20	0°♍		
asc. node	-4920 Oct 14 j 15:43	8°♈57'13			-4915 Nov 30 j 05:05	0°♈		
min. Earth dist.	-4920 Oct 29 j 03:29	3°♈36'45	0.65784 AU		-4914 Jan 09 j 07:35	0°♉		
opposition	-4920 Oct 31 j 02:46	2°♈49'10	0°37'43	evening set	-4914 Jan 15 j 22:24	4°♉49'57		
greatest brilliancy	-4920 Oct 31 j 00:48	2°♈51'08	-1.3m		-4914 Feb 20 j 05:04	0°♊		
	-4920 Nov 07 j 06:44	30°♈						
direct	-4920 Dec 09 j 17:12	23°♈20'08		conjunction	-4914 Mar 13 j 21:35	14°♈59'13	0°-45'-28	
	-4919 Jan 14 j 18:03	0°♈		minimum elong	-4914 Mar 13 j 23:29	15°♈02'29	0°45'39	
	-4919 Mar 20 j 16:55	0°♉			-4914 Apr 05 j 03:02	0°♋		
	-4919 May 10 j 14:08	0°♊		max. Earth dist.	-4914 Apr 10 j 06:09	3°♋25'03	2.58388 AU	
	-4919 Jun 25 j 14:10	0°♊		morning rise	-4914 May 05 j 14:18	20°♋04'50		
	-4919 Aug 07 j 07:36	0°♋			-4914 May 20 j 22:18	0°♈		
evening set	-4919 Sep 08 j 14:57	23°♋54'54		asc. node	-4914 Jun 06 j 13:59	10°♈38'56		
	-4919 Sep 16 j 15:38	0°♌			-4914 Jul 07 j 07:43	0°♉		
desc. node	-4919 Oct 14 j 03:09	21°♌09'36			-4914 Aug 25 j 08:19	0°♊		
max. Earth dist.	-4919 Oct 17 j 20:51	24°♌04'14	2.38232 AU		-4914 Oct 16 j 14:22	0°♊		
	-4919 Oct 25 j 11:04	0°♍			-4914 Dec 24 j 07:38	0°♋		
				retrograde	-4913 Jan 19 j 06:31	3°♋42'26		
conjunction	-4919 Nov 07 j 23:52	10°♍36'52	0°-17'-59		-4913 Feb 12 j 17:45	30°♈		
minimum elong	-4919 Nov 07 j 22:19	10°♍33'50	0°18'00	opposition	-4913 Feb 23 j 00:21	26°♉40'07	4°58'31	

Planetary Phenomena of Mars from -5400 through -4900 (UT), Astrodienst AG 7-Dez-2017 14:33, page 49

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

greatest brilliancy	-4913 Feb 25 j 01:37	25° \mathfrak{C} 57'17	-2.0m		-4908 Mar 23 j 18:21	0° Υ	
min. Earth dist.	-4913 Mar 03 j 11:18	23° \mathfrak{C} 44'42	0.50085 AU		-4908 May 10 j 16:14	0° \mathfrak{C}	
direct	-4913 Apr 02 j 08:05	18° \mathfrak{C} 02'41		evening set	-4908 May 25 j 02:11	9° \mathfrak{C} 09'45	
	-4913 May 18 j 03:58	0° \mathcal{Q}		max. Earth dist.	-4908 Jun 22 j 08:13	27° \mathfrak{C} 22'08	2.63124 AU
desc. node	-4913 Jun 06 j 00:14	9° \mathcal{Q} 40'59			-4908 Jun 26 j 09:04	0° \mathbb{I}	
	-4913 Jul 08 j 19:21	0° \mathfrak{M}					
	-4913 Aug 20 j 07:59	0° \mathfrak{L}		conjunction	-4908 Jul 10 j 23:27	9° \mathbb{I} 35'29	1°09'03
	-4913 Sep 29 j 15:09	0° \mathfrak{M}		minimum elong	-4908 Jul 10 j 22:45	9° \mathbb{I} 34'20	1°09'18
	-4913 Nov 08 j 19:09	0° \mathfrak{X}			-4908 Aug 10 j 10:30	0° \mathfrak{C}	
	-4913 Dec 19 j 23:13	0° \mathfrak{C}		morning rise	-4908 Aug 26 j 11:39	10° \mathfrak{C} 58'57	
	-4912 Jan 31 j 18:11	0° \approx			-4908 Sep 22 j 17:13	0° \mathcal{Q}	
evening set	-4912 Mar 06 j 18:00	23° \approx 38'54			-4908 Nov 03 j 09:28	0° \mathfrak{M}	
	-4912 Mar 16 j 07:51	0° \mathfrak{X}			-4908 Dec 13 j 21:02	0° \mathfrak{L}	
asc. node	-4912 Apr 23 j 08:59	24° \mathfrak{X} 50'06			-4907 Jan 22 j 18:55	0° \mathfrak{M}	
				desc. node	-4907 Jan 26 j 03:23	2° \mathfrak{M} 31'11	
conjunction	-4912 Apr 26 j 06:18	26° \mathfrak{X} 41'59	0°01'41		-4907 Mar 04 j 01:42	0° \mathfrak{X}	
minimum elong	-4912 Apr 26 j 06:12	26° \mathfrak{X} 41'49	0°01'37		-4907 Apr 15 j 09:44	0° \mathfrak{C}	
behind sun begin	-4912 Apr 25 j 10:07	26° \mathfrak{X} 09'26			-4907 Jun 03 j 08:55	0° \approx	
behind sun end	-4912 Apr 27 j 02:17	27° \mathfrak{X} 14'11		retrograde	-4907 Jul 31 j 15:34	18° \approx 13'26	
	-4912 May 01 j 09:13	0° Υ		min. Earth dist.	-4907 Sep 01 j 10:48	11° \approx 22'10	0.54548 AU
max. Earth dist.	-4912 May 05 j 20:08	2° Υ 51'54	2.65351 AU	greatest brilliancy	-4907 Sep 07 j 02:05	9° \approx 12'14	-1.9m
morning rise	-4912 Jun 12 j 16:45	27° Υ 03'08		opposition	-4907 Sep 08 j 08:15	8° \approx 43'13	-3°-56'-42
	-4912 Jun 17 j 07:59	0° \mathfrak{C}		direct	-4907 Oct 13 j 19:52	0° \approx 46'57	
	-4912 Aug 03 j 13:58	0° \mathbb{I}		asc. node	-4907 Dec 14 j 04:29	17° \approx 58'03	
	-4912 Sep 19 j 22:29	0° \mathfrak{C}			-4906 Jan 07 j 16:39	0° \mathfrak{X}	
	-4912 Nov 06 j 21:20	0° \mathcal{Q}			-4906 Mar 02 j 15:01	0° Υ	
	-4912 Dec 27 j 07:17	0° \mathfrak{M}			-4906 Apr 21 j 12:30	0° \mathfrak{C}	
	-4911 Mar 02 j 09:38	0° \mathfrak{L}			-4906 Jun 07 j 21:19	0° \mathbb{I}	
retrograde	-4911 Mar 29 j 05:55	4° \mathfrak{L} 08'18		evening set	-4906 Jul 03 j 23:13	17° \mathbb{I} 12'01	
desc. node	-4911 Apr 23 j 01:48	0° \mathfrak{L} 33'56		max. Earth dist.	-4906 Jul 21 j 18:03	29° \mathbb{I} 14'04	2.54320 AU
	-4911 Apr 25 j 05:36	30° \mathfrak{R} \mathfrak{M}			-4906 Jul 22 j 20:54	0° \mathfrak{C}	
opposition	-4911 Apr 28 j 22:16	29° \mathfrak{M} 00'02	0°-26'-22				
greatest brilliancy	-4911 Apr 29 j 00:10	28° \mathfrak{M} 58'45	-2.8m	conjunction	-4906 Aug 22 j 06:57	21° \mathfrak{C} 12'46	1°03'33
min. Earth dist.	-4911 May 02 j 15:01	27° \mathfrak{M} 59'31	0.38713 AU	minimum elong	-4906 Aug 22 j 08:22	21° \mathfrak{C} 15'15	1°03'48
direct	-4911 May 30 j 12:33	23° \mathfrak{M} 26'19			-4906 Sep 03 j 13:57	0° \mathcal{Q}	
	-4911 Jul 02 j 05:11	0° \mathfrak{L}		morning rise	-4906 Oct 13 j 09:28	29° \mathcal{Q} 16'16	
	-4911 Aug 27 j 23:21	0° \mathfrak{M}			-4906 Oct 14 j 08:48	0° \mathfrak{M}	
	-4911 Oct 12 j 17:52	0° \mathfrak{X}			-4906 Nov 22 j 18:54	0° \mathfrak{L}	
	-4911 Nov 26 j 03:41	0° \mathfrak{C}		desc. node	-4906 Dec 14 j 01:11	16° \mathfrak{L} 25'37	
	-4910 Jan 10 j 01:58	0° \approx			-4906 Dec 31 j 13:32	0° \mathfrak{M}	
	-4910 Feb 25 j 01:20	0° \mathfrak{X}			-4905 Feb 08 j 12:40	0° \mathfrak{X}	
asc. node	-4910 Mar 11 j 05:24	9° \mathfrak{X} 07'06			-4905 Mar 20 j 16:11	0° \mathfrak{C}	
	-4910 Apr 12 j 21:47	0° Υ			-4905 May 02 j 07:59	0° \approx	
evening set	-4910 Apr 17 j 12:35	2° Υ 56'21			-4905 Jun 19 j 05:03	0° \mathfrak{X}	
max. Earth dist.	-4910 May 29 j 23:40	29° Υ 58'16	2.66921 AU	retrograde	-4905 Sep 08 j 08:19	29° \mathfrak{X} 02'19	
	-4910 May 30 j 00:45	0° \mathfrak{C}		min. Earth dist.	-4905 Oct 14 j 21:59	20° \mathfrak{X} 27'24	0.63739 AU
				opposition	-4905 Oct 18 j 08:21	19° \mathfrak{X} 04'44	0°-32'-52
conjunction	-4910 Jun 03 j 22:08	3° \mathfrak{C} 07'25	0°44'07	greatest brilliancy	-4905 Oct 18 j 06:06	19° \mathfrak{X} 07'00	-1.4m
minimum elong	-4910 Jun 03 j 20:52	3° \mathfrak{C} 05'23	0°44'14	asc. node	-4905 Nov 01 j 05:57	13° \mathfrak{X} 55'57	
	-4910 Jul 15 j 16:42	0° \mathbb{I}		direct	-4905 Nov 26 j 01:23	9° \mathfrak{X} 54'30	
morning rise	-4910 Jul 19 j 08:44	2° \mathbb{I} 22'54			-4904 Feb 02 j 19:26	0° Υ	
	-4910 Aug 30 j 09:30	0° \mathfrak{C}			-4904 Mar 30 j 03:02	0° \mathfrak{C}	
	-4910 Oct 13 j 23:45	0° \mathcal{Q}			-4904 May 18 j 10:38	0° \mathbb{I}	
	-4910 Nov 26 j 15:39	0° \mathfrak{M}			-4904 Jul 02 j 23:24	0° \mathfrak{C}	
	-4909 Jan 08 j 19:58	0° \mathfrak{L}			-4904 Aug 14 j 14:26	0° \mathcal{Q}	
	-4909 Feb 21 j 13:43	0° \mathfrak{M}		evening set	-4904 Aug 18 j 07:05	2° \mathcal{Q} 40'59	
desc. node	-4909 Mar 11 j 02:56	11° \mathfrak{M} 33'28		max. Earth dist.	-4904 Sep 06 j 03:58	16° \mathcal{Q} 35'22	2.42161 AU
	-4909 Apr 10 j 11:07	0° \mathfrak{X}			-4904 Sep 23 j 23:47	0° \mathfrak{M}	
retrograde	-4909 Jun 12 j 00:02	21° \mathfrak{X} 09'07					
min. Earth dist.	-4909 Jul 08 j 19:15	16° \mathfrak{X} 25'51	0.42172 AU	conjunction	-4904 Oct 13 j 16:29	15° \mathfrak{M} 04'53	0°12'24
greatest brilliancy	-4909 Jul 14 j 05:34	14° \mathfrak{X} 43'28	-2.5m	minimum elong	-4904 Oct 13 j 17:25	15° \mathfrak{M} 06'41	0°12'28
opposition	-4909 Jul 16 j 06:55	14° \mathfrak{X} 04'12	-6°-22'-36	behind sun begin	-4904 Oct 13 j 00:43	14° \mathfrak{M} 34'30	
direct	-4909 Aug 16 j 13:03	8° \mathfrak{X} 11'23		behind sun end	-4904 Oct 14 j 10:06	15° \mathfrak{M} 38'53	
	-4909 Oct 23 j 23:30	0° \mathfrak{C}		desc. node	-4904 Oct 30 j 21:07	28° \mathfrak{M} 25'23	
	-4909 Dec 16 j 11:21	0° \approx			-4904 Nov 01 j 21:38	0° \mathfrak{L}	
asc. node	-4908 Jan 27 j 04:12	25° \approx 09'25			-4904 Dec 10 j 04:18	0° \mathfrak{M}	
	-4908 Feb 04 j 02:22	0° \mathfrak{X}		morning rise	-4904 Dec 16 j 10:38	4° \mathfrak{M} 54'36	

Attention, astronomical year style is used: The year -5399 in astronomical counting style is the year 5400 BCE in historical counting style.

	-4903 Jan 17 j 16:38	0°♁	
	-4903 Feb 26 j 07:31	0°♂	
	-4903 Apr 08 j 21:23	0°≈	
	-4903 May 23 j 08:48	0°✕	
	-4903 Jul 11 j 15:57	0°♀	
	-4903 Sep 16 j 17:07	0°♄	
asc. node	-4903 Sep 18 j 07:52	0°♄25'20	
retrograde	-4903 Oct 12 j 06:08	3°♄41'36	
	-4903 Nov 04 j 22:01	30°♄	
opposition	-4903 Nov 21 j 02:04	24°♀03'07	2°17'28
greatest brilliancy	-4903 Nov 21 j 01:27	24°♀03'44	-1.3m
min. Earth dist.	-4903 Nov 21 j 09:32	23°♀55'38	0.67093 AU
direct	-4903 Dec 31 j 17:04	14°♀13'21	
	-4902 Feb 28 j 18:31	0°♄	
	-4902 Apr 26 j 08:48	0°♂	
	-4902 Jun 12 j 20:04	0°♂	
	-4902 Jul 26 j 00:27	0°♂	
	-4902 Sep 04 j 10:52	0°♄	
desc. node	-4902 Sep 17 j 18:40	10°♄12'17	
	-4902 Oct 13 j 05:32	0°♂	
evening set	-4902 Oct 16 j 22:11	2°♂53'47	
	-4902 Nov 20 j 08:35	0°♄	
conjunction	-4902 Dec 21 j 00:10	23°♄58'58	0°-57'-58
minimum elong	-4902 Dec 20 j 21:11	23°♄53'10	0°58'10
	-4902 Dec 28 j 18:43	0°♁	
	-4901 Feb 06 j 08:25	0°♂	
max. Earth dist.	-4901 Feb 06 j 15:05	0°♂12'23	2.41511 AU
morning rise	-4901 Feb 25 j 00:29	13°♂42'52	
	-4901 Mar 19 j 18:17	0°≈	
	-4901 May 02 j 11:57	0°✕	
	-4901 Jun 18 j 00:21	0°♀	
asc. node	-4901 Aug 06 j 07:46	29°♀18'46	
	-4901 Aug 07 j 13:15	0°♄	
	-4901 Oct 09 j 12:59	0°♂	
retrograde	-4901 Nov 17 j 11:24	7°♂43'36	
	-4901 Dec 22 j 23:58	30°♄	
opposition	-4901 Dec 26 j 01:43	28°♄48'26	4°24'55
greatest brilliancy	-4901 Dec 26 j 19:28	28°♄31'04	-1.4m
min. Earth dist.	-4901 Dec 30 j 04:17	27°♄12'07	0.64134 AU
direct	-4900 Feb 05 j 05:40	18°♄48'30	
	-4900 Mar 23 j 08:16	0°♂	
	-4900 May 19 j 02:05	0°♂	
	-4900 Jul 03 j 13:02	0°♂	
desc. node	-4900 Aug 04 j 16:55	23°♂13'22	
	-4900 Aug 13 j 18:42	0°♄	
	-4900 Sep 21 j 21:40	0°♂	
	-4900 Oct 30 j 06:18	0°♄	
	-4900 Dec 07 j 22:23	0°♁	
evening set	-4900 Dec 23 j 02:35	11°♁33'31	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 1

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

conjunction	-4899 Feb 21 j 13:23	25°☾50'40	0°-59'-54		-4895 Oct 22 j 08:30	0°♈	
minimum elong	-4899 Feb 21 j 15:21	25°☾54'08	1°00'09		-4895 Dec 06 j 13:21	0°♍	
	-4899 Feb 27 j 10:51	0°≈			-4894 Jan 21 j 08:13	0°♊	
max. Earth dist.	-4899 Mar 28 j 21:43	20°≈21'07	2.54258 AU		-4894 Mar 11 j 20:22	0°♌	
	-4899 Apr 12 j 04:58	0°♋		desc. node	-4894 Mar 27 j 19:49	8°♌15'25	
morning rise	-4899 Apr 18 j 12:20	4°♋12'28		retrograde	-4894 May 16 j 17:48	22°♌11'00	
	-4899 May 28 j 00:50	0°♌		min. Earth dist.	-4894 Jun 13 j 02:01	17°♌43'16	0.38670 AU
asc. node	-4899 Jun 23 j 05:25	16°♌35'35		greatest brilliancy	-4894 Jun 16 j 10:55	16°♌46'39	-2.8m
	-4899 Jul 14 j 20:20	0°♍		opposition	-4894 Jun 17 j 14:52	16°♌27'02	-5°-25'-36
	-4899 Sep 03 j 06:36	0°♎		direct	-4894 Jul 17 j 13:11	11°♌18'42	
	-4899 Oct 30 j 19:13	0°☊			-4894 Sep 16 j 16:12	0°♏	
retrograde	-4899 Dec 29 j 15:31	16°☊08'53			-4894 Nov 08 j 08:31	0°☐	
opposition	-4898 Feb 03 j 19:15	8°☊26'14	5°19'30		-4894 Dec 26 j 14:40	0°≈	
greatest brilliancy	-4898 Feb 05 j 15:44	7°☊45'29	-1.8m	asc. node	-4893 Feb 12 j 19:25	0°♋19'04	
min. Earth dist.	-4898 Feb 11 j 10:30	5°☊39'11	0.54992 AU		-4893 Feb 12 j 07:17	0°♋	
	-4898 Mar 04 j 02:30	30°♌♎			-4893 Apr 01 j 01:47	0°♌	
direct	-4898 Mar 15 j 13:22	29°♎06'46		evening set	-4893 May 11 j 04:25	25°♌17'52	
	-4898 Mar 27 j 06:49	0°☊			-4893 May 18 j 14:11	0°♍	
	-4898 Jun 05 j 13:27	0°♈		max. Earth dist.	-4893 Jun 13 j 15:41	16°♍40'20	2.65228 AU
desc. node	-4898 Jun 22 j 16:13	10°♈49'24					
	-4898 Jul 20 j 15:24	0°♍		conjunction	-4893 Jun 26 j 23:05	25°♍16'34	1°02'12
	-4898 Aug 30 j 08:51	0°♊		minimum elong	-4893 Jun 26 j 21:56	25°♍14'42	1°02'23
	-4898 Oct 08 j 17:34	0°♌			-4893 Jul 04 j 05:17	0°♎	
	-4898 Nov 17 j 05:34	0°♏		morning rise	-4893 Aug 11 j 15:31	25°♎24'45	
	-4898 Dec 27 j 20:24	0°☐			-4893 Aug 18 j 11:09	0°☊	
	-4897 Feb 08 j 04:29	0°≈			-4893 Oct 01 j 03:29	0°♈	
evening set	-4897 Feb 17 j 09:40	6°≈21'31			-4893 Nov 12 j 09:55	0°♍	
	-4897 Mar 24 j 09:55	0°♋			-4893 Dec 23 j 15:02	0°♊	
					-4892 Feb 02 j 10:08	0°♌	
conjunction	-4897 Apr 11 j 00:10	11°♋36'56	0°-17'-4	desc. node	-4892 Feb 12 j 19:48	7°♌36'45	
minimum elong	-4897 Apr 11 j 00:55	11°♋38'10	0°17'11		-4892 Mar 14 j 23:12	0°♏	
max. Earth dist.	-4897 Apr 27 j 03:33	22°♋08'44	2.63230 AU		-4892 Apr 29 j 02:56	0°☐	
	-4897 May 09 j 07:02	0°♌		retrograde	-4892 Jul 14 j 00:19	28°☐52'39	
asc. node	-4897 May 11 j 02:06	1°♌09'22		min. Earth dist.	-4892 Aug 12 j 15:52	22°☐52'38	0.49730 AU
morning rise	-4897 May 30 j 01:48	13°♌19'43		greatest brilliancy	-4892 Aug 18 j 15:54	20°☐41'00	-2.1m
	-4897 Jun 25 j 07:29	0°♍		opposition	-4892 Aug 20 j 11:54	20°☐00'34	-5°-14'-46
	-4897 Aug 12 j 00:58	0°♎		direct	-4892 Sep 23 j 08:18	12°☐46'59	
	-4897 Sep 29 j 15:07	0°☊			-4892 Nov 23 j 00:41	0°≈	
	-4897 Nov 19 j 14:29	0°♈		asc. node	-4892 Dec 30 j 19:09	19°≈20'05	
	-4896 Jan 20 j 18:45	0°♍			-4891 Jan 18 j 20:54	0°♋	
retrograde	-4896 Feb 27 j 21:22	7°♍37'18			-4891 Mar 10 j 22:38	0°♌	
opposition	-4896 Mar 30 j 22:48	1°♍50'10	2°38'43		-4891 Apr 28 j 20:31	0°♍	
greatest brilliancy	-4896 Apr 01 j 02:18	1°♍29'12	-2.5m		-4891 Jun 14 j 21:19	0°♎	
	-4896 Apr 05 j 23:43	30°♌♎		evening set	-4891 Jun 17 j 23:54	2°♎01'41	
min. Earth dist.	-4896 Apr 07 j 04:40	29°♎38'31	0.42274 AU	max. Earth dist.	-4891 Jul 09 j 05:38	16°♎03'50	2.58324 AU
direct	-4896 May 04 j 12:18	25°♎00'19			-4891 Jul 29 j 20:43	0°☊	
desc. node	-4896 May 09 j 17:39	25°♎11'44					
	-4896 Jun 01 j 11:07	0°♍		conjunction	-4891 Aug 04 j 22:00	4°☊09'01	1°10'20
	-4896 Jul 29 j 02:51	0°♊		minimum elong	-4891 Aug 04 j 22:30	4°☊09'53	1°10'37
	-4896 Sep 11 j 08:59	0°♌			-4891 Sep 10 j 17:59	0°♈	
	-4896 Oct 23 j 16:35	0°♏		morning rise	-4891 Sep 23 j 02:40	8°♏54'13	
	-4896 Dec 05 j 07:20	0°☐			-4891 Oct 21 j 19:41	0°♍	
	-4895 Jan 18 j 03:12	0°≈			-4891 Nov 30 j 13:36	0°♊	
	-4895 Mar 04 j 09:50	0°♋		desc. node	-4891 Dec 30 j 19:32	23°♊11'45	
asc. node	-4895 Mar 27 j 22:04	15°♋15'17			-4890 Jan 08 j 16:00	0°♌	
evening set	-4895 Apr 01 j 21:57	18°♋28'30			-4890 Feb 16 j 23:13	0°♏	
	-4895 Apr 19 j 20:46	0°♌			-4890 Mar 29 j 14:03	0°☐	
					-4890 May 12 j 08:17	0°≈	
conjunction	-4895 May 20 j 05:06	19°♌23'07	0°29'08		-4890 Jul 03 j 18:00	0°♋	
minimum elong	-4895 May 20 j 04:06	19°♌21'32	0°29'10	retrograde	-4890 Aug 25 j 02:29	14°♋29'43	
max. Earth dist.	-4895 May 20 j 16:29	19°♌41'16	2.66950 AU	min. Earth dist.	-4890 Sep 28 j 23:25	6°♋30'37	0.60793 AU
	-4895 Jun 05 j 20:26	0°♍		opposition	-4890 Oct 03 j 19:57	4°♋34'43	-1°-48'-57
morning rise	-4895 Jul 05 j 02:35	18°♍42'49		greatest brilliancy	-4890 Oct 03 j 09:42	4°♋44'54	-1.6m
	-4895 Jul 22 j 15:47	0°♎			-4890 Oct 16 j 05:20	30°♌≈	
	-4895 Sep 06 j 20:12	0°☊		direct	-4890 Nov 10 j 10:50	25°≈48'19	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 2

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

asc. node	-4890 Nov 17 j 19:59	26° \approx 08'20		minimum elong	-4884 Jan 30 j 18:16	4° \approx 06'30	1°08'14
	-4890 Dec 08 j 02:26	0° H			-4884 Mar 06 j 16:53	0° \approx	
	-4889 Feb 14 j 20:17	0° Y		max. Earth dist.	-4884 Mar 13 j 21:31	5° \approx 02'54	2.49510 AU
	-4889 Apr 08 j 13:56	0° B		morning rise	-4884 Mar 30 j 14:03	16° \approx 35'50	
	-4889 May 26 j 22:08	0° II			-4884 Apr 19 j 09:00	0° H	
	-4889 Jul 11 j 04:18	0° S			-4884 Jun 04 j 07:56	0° Y	
evening set	-4889 Jul 31 j 00:37	13° S 45'21		asc. node	-4884 Jul 09 j 22:16	22° Y 12'19	
max. Earth dist.	-4889 Aug 15 j 04:39	24° S 31'03	2.47093 AU		-4884 Jul 22 j 19:26	0° B	
	-4889 Aug 22 j 19:26	0° Ω			-4884 Sep 13 j 13:40	0° II	
					-4884 Dec 02 j 23:23	0° S	
conjunction	-4889 Sep 21 j 23:06	22° Ω 12'00	0°38'14	retrograde	-4884 Dec 11 j 12:25	0° S 26'21	
minimum elong	-4889 Sep 22 j 01:08	22° Ω 15'48	0°38'23		-4884 Dec 19 j 20:00	30° R II	
	-4889 Oct 02 j 07:56	0° M		opposition	-4883 Jan 17 j 19:22	22° II 10'37	5°11'26
	-4889 Nov 10 j 09:44	0° $\underline{\text{A}}$		greatest brilliancy	-4883 Jan 19 j 05:55	21° II 37'53	-1.6m
desc. node	-4889 Nov 17 j 17:00	5° $\underline{\text{A}}$ 40'57		min. Earth dist.	-4883 Jan 24 j 04:16	19° II 46'09	0.59261 AU
morning rise	-4889 Nov 19 j 17:41	7° $\underline{\text{A}}$ 15'48		direct	-4883 Feb 27 j 10:33	12° II 26'03	
	-4889 Dec 18 j 19:52	0° M			-4883 Apr 28 j 00:29	0° S	
	-4888 Jan 26 j 10:50	0° J			-4883 Jun 17 j 18:52	0° Ω	
greatest brilliancy	-4888 Jan 27 j 13:27	0° J 51'08	1.2m	desc. node	-4883 Jul 09 j 09:38	14° Ω 46'17	
	-4888 Mar 06 j 04:05	0° Z			-4883 Jul 30 j 13:47	0° M	
	-4888 Apr 16 j 23:03	0° \approx			-4883 Sep 08 j 09:35	0° $\underline{\text{A}}$	
	-4888 Jun 01 j 03:20	0° H			-4883 Oct 17 j 05:03	0° M	
	-4888 Jul 23 j 08:13	0° Y			-4883 Nov 25 j 06:29	0° J	
retrograde	-4888 Sep 28 j 19:32	20° Y 45'27			-4882 Jan 04 j 11:52	0° Z	
asc. node	-4888 Oct 04 j 21:15	20° Y 30'44		evening set	-4882 Jan 28 j 07:08	17° Z 10'27	
opposition	-4888 Nov 07 j 20:33	10° Y 56'08	1°16'16		-4882 Feb 15 j 11:46	0° \approx	
min. Earth dist.	-4888 Nov 06 j 16:47	11° Y 24'03	0.66525 AU				
greatest brilliancy	-4888 Nov 07 j 17:56	10° Y 58'46	-1.3m	conjunction	-4882 Mar 24 j 13:18	25° \approx 22'09	0°-35'-31
direct	-4888 Dec 17 j 21:22	1° Y 18'26		minimum elong	-4882 Mar 24 j 14:52	25° \approx 24'47	0°35'40
	-4887 Mar 13 j 19:00	0° B			-4882 Mar 31 j 11:14	0° H	
	-4887 May 05 j 04:25	0° II		max. Earth dist.	-4882 Apr 16 j 19:19	10° H 49'40	2.60333 AU
	-4887 Jun 20 j 15:48	0° S		morning rise	-4882 May 14 j 18:52	29° H 03'12	
	-4887 Aug 02 j 13:09	0° Ω			-4882 May 16 j 06:07	0° Y	
	-4887 Sep 11 j 22:22	0° M		asc. node	-4882 May 27 j 18:39	7° Y 23'56	
evening set	-4887 Sep 21 j 17:58	7° M 30'14			-4882 Jul 02 j 10:53	0° B	
desc. node	-4887 Oct 04 j 12:44	17° M 22'09			-4882 Aug 19 j 21:28	0° II	
	-4887 Oct 20 j 17:37	0° $\underline{\text{A}}$			-4882 Oct 09 j 09:50	0° S	
					-4882 Dec 05 j 22:40	0° Ω	
conjunction	-4887 Nov 23 j 05:14	26° $\underline{\text{A}}$ 19'31	0°-34'-46	retrograde	-4881 Feb 01 j 13:17	15° Ω 18'31	
minimum elong	-4887 Nov 23 j 02:23	26° $\underline{\text{A}}$ 13'55	0°34'50	opposition	-4881 Mar 07 j 07:45	8° Ω 42'06	4°25'56
	-4887 Nov 27 j 21:20	0° M		greatest brilliancy	-4881 Mar 09 j 06:26	8° Ω 03'05	-2.2m
max. Earth dist.	-4887 Dec 09 j 05:16	8° M 54'00	2.37780 AU	min. Earth dist.	-4881 Mar 15 j 18:55	5° Ω 53'09	0.47210 AU
	-4886 Jan 05 j 07:25	0° J		direct	-4881 Apr 13 j 12:57	0° Ω 37'25	
morning rise	-4886 Jan 29 j 23:20	18° J 51'03		desc. node	-4881 May 27 j 09:55	11° Ω 52'51	
	-4886 Feb 13 j 20:16	0° Z			-4881 Jun 29 j 15:50	0° M	
	-4886 Mar 27 j 05:37	0° \approx			-4881 Aug 13 j 08:09	0° $\underline{\text{A}}$	
	-4886 May 10 j 02:21	0° H			-4881 Sep 23 j 12:49	0° M	
	-4886 Jun 26 j 05:46	0° Y			-4881 Nov 03 j 06:03	0° J	
	-4886 Aug 18 j 07:27	0° B			-4881 Dec 14 j 19:18	0° Z	
asc. node	-4886 Aug 22 j 22:40	2° B 19'51			-4880 Jan 26 j 20:55	0° \approx	
retrograde	-4886 Nov 02 j 22:43	24° B 28'15			-4880 Mar 11 j 15:01	0° H	
opposition	-4886 Dec 12 j 03:52	15° B 13'18	3°41'31	evening set	-4880 Mar 16 j 13:03	3° H 14'04	
greatest brilliancy	-4886 Dec 12 j 12:33	15° B 04'43	-1.3m	asc. node	-4880 Apr 13 j 14:45	21° H 30'49	
min. Earth dist.	-4886 Dec 14 j 18:49	14° B 11'01	0.66046 AU		-4880 Apr 26 j 18:46	0° Y	
direct	-4885 Jan 22 j 07:21	5° B 13'16					
	-4885 Apr 08 j 20:18	0° II		conjunction	-4880 May 05 j 03:11	5° Y 21'43	0°12'08
	-4885 May 29 j 19:40	0° S		minimum elong	-4880 May 05 j 02:42	5° Y 20'57	0°12'08
	-4885 Jul 13 j 00:53	0° Ω		behind sun begin	-4880 May 04 j 13:48	5° Y 00'16	
desc. node	-4885 Aug 22 j 10:03	29° Ω 40'51		behind sun end	-4880 May 05 j 15:37	5° Y 41'39	
	-4885 Aug 22 j 20:11	0° M		max. Earth dist.	-4880 May 11 j 08:49	9° Y 21'25	2.66153 AU
	-4885 Sep 30 j 18:17	0° $\underline{\text{A}}$			-4880 Jun 12 j 17:05	0° B	
	-4885 Nov 07 j 23:27	0° M		morning rise	-4880 Jun 20 j 21:31	5° B 12'47	
evening set	-4885 Nov 28 j 02:05	15° M 44'10			-4880 Jul 29 j 18:34	0° II	
	-4885 Dec 16 j 12:03	0° J			-4880 Sep 14 j 15:16	0° S	
	-4884 Jan 25 j 04:41	0° Z			-4880 Oct 31 j 12:01	0° Ω	
					-4880 Dec 18 j 07:50	0° M	
conjunction	-4884 Jan 30 j 17:34	4° Z 05'13	-1°-7'-58		-4879 Feb 08 j 10:44	0° $\underline{\text{A}}$	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 3

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

desc. node	-4879 Apr 13 j 11:50	21°♄16'45	evening set	-4874 Jul 13 j 11:10	26°♄44'14	
retrograde	-4879 Apr 16 j 09:00	21°♄19'59		-4874 Jul 18 j 05:59	0°♄	
opposition	-4879 May 16 j 20:03	16°♄16'22 -2°-31'-11	max. Earth dist.	-4874 Jul 29 j 15:49	7°♄51'51	2.51862 AU
greatest brilliancy	-4879 May 16 j 20:42	16°♄15'56 -2.9m		-4874 Aug 29 j 22:36	0°♄	
min. Earth dist.	-4879 May 17 j 14:25	16°♄04'07	0.37799 AU			
direct	-4879 Jun 16 j 08:00	11°♄08'59	conjunction	-4874 Sep 01 j 20:09	2°♄05'33	0°56'31
	-4879 Aug 15 j 05:47	0°♄	minimum elong	-4874 Sep 01 j 21:58	2°♄08'51	0°56'44
	-4879 Oct 04 j 17:10	0°♄		-4874 Oct 09 j 15:18	0°♄	
	-4879 Nov 19 j 19:54	0°♄	morning rise	-4874 Oct 26 j 00:28	12°♄24'32	
	-4878 Jan 04 j 14:58	0°♄		-4874 Nov 17 j 22:20	0°♄	
	-4878 Feb 20 j 02:02	0°♄	desc. node	-4874 Dec 04 j 10:52	12°♄48'15	
asc. node	-4878 Mar 01 j 11:31	6°♄00'26		-4874 Dec 26 j 13:29	0°♄	
	-4878 Apr 08 j 05:01	0°♄		-4873 Feb 03 j 09:01	0°♄	
evening set	-4878 Apr 26 j 05:23	11°♄25'36		-4873 Mar 15 j 07:29	0°♄	
	-4878 May 25 j 10:40	0°♄		-4873 Apr 26 j 12:38	0°♄	
max. Earth dist.	-4878 Jun 04 j 09:23	6°♄21'00	2.66557 AU	-4873 Jun 12 j 00:21	0°♄	
				-4873 Aug 10 j 16:53	0°♄	
conjunction	-4878 Jun 12 j 06:43	11°♄24'11	0°51'38	retrograde	-4873 Sep 16 j 06:31	7°♄24'35
minimum elong	-4878 Jun 12 j 05:25	11°♄22'05	0°51'46		-4873 Oct 20 j 00:40	30°♄
	-4878 Jul 11 j 02:09	0°♄		asc. node	-4873 Oct 22 j 12:24	29°♄00'57
morning rise	-4878 Jul 27 j 15:58	10°♄49'32		min. Earth dist.	-4873 Oct 23 j 17:24	28°♄31'56 0.64983 AU
	-4878 Aug 25 j 14:53	0°♄		opposition	-4873 Oct 26 j 08:15	27°♄28'45 0°08'54
	-4878 Oct 08 j 20:39	0°♄		greatest brilliancy	-4873 Oct 26 j 07:38	27°♄29'23 -1.4m
	-4878 Nov 20 j 22:55	0°♄		direct	-4873 Dec 04 j 14:04	18°♄07'30
	-4877 Jan 02 j 06:26	0°♄			-4872 Jan 23 j 16:35	0°♄
	-4877 Feb 13 j 13:42	0°♄			-4872 Mar 24 j 02:03	0°♄
desc. node	-4877 Mar 01 j 14:32	11°♄09'10			-4872 May 13 j 07:29	0°♄
	-4877 Mar 29 j 19:50	0°♄			-4872 Jun 28 j 04:07	0°♄
	-4877 May 24 j 22:49	0°♄			-4872 Aug 09 j 21:46	0°♄
retrograde	-4877 Jun 24 j 21:33	6°♄11'36		evening set	-4872 Aug 30 j 01:42	14°♄47'27
min. Earth dist.	-4877 Jul 22 j 12:05	1°♄03'57	0.44708 AU		-4872 Sep 19 j 07:27	0°♄
	-4877 Jul 25 j 16:58	30°♄		max. Earth dist.	-4872 Sep 25 j 16:03	4°♄50'38 2.39750 AU
greatest brilliancy	-4877 Jul 28 j 08:32	29°♄06'02	-2.4m	desc. node	-4872 Oct 21 j 07:26	24°♄38'13
opposition	-4877 Jul 30 j 12:14	28°♄22'09	-6°-12'-35			
direct	-4877 Aug 31 j 15:48	21°♄59'35		conjunction	-4872 Oct 27 j 15:02	29°♄33'50 0°-4'-37
	-4877 Oct 08 j 19:39	0°♄		minimum elong	-4872 Oct 27 j 14:39	29°♄33'06 0°04'36
	-4877 Dec 09 j 00:33	0°♄		behind sun begin	-4872 Oct 26 j 13:03	28°♄43'07
asc. node	-4876 Jan 17 j 09:38	22°♄51'06		behind sun end	-4872 Oct 28 j 16:15	0°♄23'06
	-4876 Jan 29 j 08:56	0°♄			-4872 Oct 28 j 04:27	0°♄
	-4876 Mar 18 j 17:47	0°♄			-4872 Dec 05 j 09:36	0°♄
	-4876 May 05 j 23:12	0°♄		morning rise	-4871 Jan 01 j 15:02	21°♄18'05
evening set	-4876 Jun 02 j 17:07	17°♄39'08			-4871 Jan 12 j 20:27	0°♄
	-4876 Jun 21 j 18:48	0°♄			-4871 Feb 21 j 09:34	0°♄
max. Earth dist.	-4876 Jun 28 j 07:30	4°♄16'22	2.61625 AU		-4871 Apr 03 j 20:13	0°♄
					-4871 May 17 j 23:49	0°♄
conjunction	-4876 Jul 19 j 19:37	18°♄31'30	1°11'01		-4871 Jul 05 j 05:05	0°♄
minimum elong	-4876 Jul 19 j 19:18	18°♄30'57	1°11'16		-4871 Sep 01 j 16:48	0°♄
	-4876 Aug 05 j 19:41	0°♄		asc. node	-4871 Sep 08 j 14:02	2°♄42'34
morning rise	-4876 Sep 05 j 01:17	20°♄53'18		retrograde	-4871 Oct 20 j 01:32	11°♄32'08
	-4876 Sep 17 j 23:07	0°♄		opposition	-4871 Nov 28 j 17:34	2°♄01'12 2°50'21
	-4876 Oct 29 j 10:06	0°♄		greatest brilliancy	-4871 Nov 28 j 19:32	1°♄59'15 -1.3m
	-4876 Dec 08 j 14:58	0°♄		min. Earth dist.	-4871 Nov 29 j 21:04	1°♄33'46 0.66985 AU
desc. node	-4875 Jan 16 j 13:43	29°♄31'22			-4871 Dec 03 j 19:52	30°♄
	-4875 Jan 17 j 04:48	0°♄		direct	-4870 Jan 08 j 14:38	22°♄06'31
	-4875 Feb 26 j 00:59	0°♄			-4870 Feb 17 j 00:08	0°♄
	-4875 Apr 08 j 12:20	0°♄			-4870 Apr 20 j 01:20	0°♄
	-4875 May 24 j 13:53	0°♄			-4870 Jun 07 j 12:18	0°♄
retrograde	-4875 Aug 09 j 21:49	28°♄32'54			-4870 Jul 21 j 00:47	0°♄
min. Earth dist.	-4875 Sep 11 j 20:15	21°♄16'06	0.56953 AU		-4870 Aug 30 j 14:31	0°♄
greatest brilliancy	-4875 Sep 17 j 03:26	19°♄12'01	-1.7m	desc. node	-4870 Sep 08 j 04:06	6°♄31'56
opposition	-4875 Sep 18 j 01:38	18°♄50'20	-3°-9'-43		-4870 Oct 08 j 10:33	0°♄
direct	-4875 Oct 24 j 09:09	10°♄34'16		evening set	-4870 Oct 31 j 23:25	18°♄29'37
asc. node	-4875 Dec 04 j 10:08	19°♄12'05			-4870 Nov 15 j 14:09	0°♄
	-4875 Dec 29 j 22:02	0°♄			-4870 Dec 24 j 00:40	0°♄
	-4874 Feb 24 j 17:35	0°♄				
	-4874 Apr 16 j 11:06	0°♄		conjunction	-4869 Jan 05 j 06:42	9°♄24'26 -1°-5'-24
	-4874 Jun 03 j 03:46	0°♄		minimum elong	-4869 Jan 05 j 04:56	9°♄21'03 1°05'39

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 4

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4869 Feb 01 j 14:32	0°☾		opposition	-4864 Apr 15 j 17:15	17°☾02'00	1°02'40
max. Earth dist.	-4869 Feb 22 j 23:04	15°☾39'57	2.44325 AU	greatest brilliancy	-4864 Apr 16 j 02:44	16°☾55'14	-2.7m
morning rise	-4869 Mar 10 j 07:06	26°☾40'10		min. Earth dist.	-4864 Apr 21 j 08:22	15°☾25'57	0.40056 AU
	-4869 Mar 14 j 23:55	0°≈		desc. node	-4864 Apr 30 j 05:00	13°☾09'28	
	-4869 Apr 27 j 15:33	0°☿		direct	-4864 May 18 j 13:45	10°☾56'39	
	-4869 Jun 12 j 20:41	0°♀			-4864 Jul 16 j 19:25	0°♊	
asc. node	-4869 Jul 27 j 13:38	27°♀11'20			-4864 Sep 03 j 07:22	0°♋	
	-4869 Aug 01 j 09:46	0°♌			-4864 Oct 17 j 03:52	0°♍	
	-4869 Sep 27 j 16:03	0°♎			-4864 Nov 29 j 14:57	0°☾	
retrograde	-4869 Nov 26 j 04:51	16°♎00'59			-4863 Jan 12 j 23:08	0°≈	
opposition	-4868 Jan 03 j 09:37	7°♎18'28	4°45'30		-4863 Feb 27 j 13:41	0°☿	
greatest brilliancy	-4868 Jan 04 j 09:14	6°♎55'35	-1.4m	asc. node	-4863 Mar 18 j 02:47	11°☿59'23	
min. Earth dist.	-4868 Jan 08 j 08:24	5°♎23'35	0.62650 AU	evening set	-4863 Apr 10 j 22:58	27°☿16'52	
	-4868 Jan 24 j 10:35	30°♌♌			-4863 Apr 15 j 05:08	0°♀	
direct	-4868 Feb 13 j 11:31	27°♌21'26		max. Earth dist.	-4863 May 26 j 02:45	26°♀04'32	2.67048 AU
	-4868 Mar 05 j 16:38	0°♎					
	-4868 May 12 j 01:14	0°☾		conjunction	-4863 May 28 j 16:46	27°♀43'24	0°38'08
	-4868 Jun 27 j 18:54	0°♏		minimum elong	-4863 May 28 j 15:35	27°♀41'31	0°38'13
desc. node	-4868 Jul 26 j 02:08	20°♏07'15			-4863 Jun 01 j 06:23	0°♌	
	-4868 Aug 08 j 11:07	0°☾		morning rise	-4863 Jul 13 j 06:44	26°♌56'51	
	-4868 Sep 16 j 19:04	0°♊			-4863 Jul 18 j 00:06	0°♎	
	-4868 Oct 25 j 06:43	0°♋			-4863 Sep 01 j 22:08	0°☾	
	-4868 Dec 03 j 01:20	0°♍			-4863 Oct 16 j 21:51	0°♏	
evening set	-4867 Jan 05 j 22:00	25°♍30'15			-4863 Nov 30 j 04:29	0°☾	
	-4867 Jan 12 j 00:09	0°☾			-4862 Jan 13 j 07:23	0°♊	
	-4867 Feb 22 j 17:50	0°≈			-4862 Feb 27 j 18:28	0°♋	
				desc. node	-4862 Mar 18 j 06:17	11°♋22'53	
conjunction	-4867 Mar 05 j 09:30	7°≈25'45	0°-52'-8		-4862 Apr 22 j 21:33	0°♍	
minimum elong	-4867 Mar 05 j 11:33	7°≈29'19	0°52'22	retrograde	-4862 Jun 01 j 04:34	9°♍21'11	
max. Earth dist.	-4867 Apr 05 j 05:58	28°≈28'04	2.56636 AU	min. Earth dist.	-4862 Jun 27 j 19:32	4°♍50'43	0.40363 AU
	-4867 Apr 07 j 12:49	0°☿		greatest brilliancy	-4862 Jul 02 j 13:16	3°♍26'13	-2.7m
morning rise	-4867 Apr 28 j 10:50	13°☿51'53		opposition	-4862 Jul 04 j 07:44	2°♍54'20	-6°-12'-22
	-4867 May 23 j 07:00	0°♀			-4862 Jul 14 j 17:33	30°♌♌	
asc. node	-4867 Jun 13 j 11:30	13°♀30'42		direct	-4862 Aug 03 j 21:17	27°♌24'16	
	-4867 Jul 09 j 19:20	0°♌			-4862 Aug 24 j 08:59	0°♍	
	-4867 Aug 28 j 07:48	0°♎			-4862 Oct 30 j 16:06	0°☾	
	-4867 Oct 21 j 05:57	0°☾			-4862 Dec 20 j 07:46	0°≈	
retrograde	-4866 Jan 09 j 23:19	26°☾15'51		asc. node	-4861 Feb 03 j 01:17	27°≈33'46	
opposition	-4866 Feb 14 j 09:12	18°☾54'33	5°11'29		-4861 Feb 06 j 23:38	0°☿	
greatest brilliancy	-4866 Feb 16 j 09:26	18°☾11'32	-1.9m		-4861 Mar 27 j 05:13	0°♀	
min. Earth dist.	-4866 Feb 22 j 13:30	16°☾00'14	0.52342 AU		-4861 May 13 j 22:48	0°♌	
direct	-4866 Mar 25 j 10:44	9°☾55'34		evening set	-4861 May 19 j 17:53	3°♌40'45	
	-4866 May 26 j 20:01	0°♏		max. Earth dist.	-4861 Jun 19 j 08:19	23°♌18'24	2.64170 AU
desc. node	-4866 Jun 13 j 03:22	10°♏00'43			-4861 Jun 29 j 15:30	0°♎	
	-4866 Jul 13 j 17:28	0°☾					
	-4866 Aug 24 j 08:19	0°♊		conjunction	-4861 Jul 05 j 12:20	3°♎50'13	1°06'40
	-4866 Oct 03 j 03:53	0°♋		minimum elong	-4861 Jul 05 j 11:25	3°♎48'43	1°06'52
	-4866 Nov 11 j 23:23	0°♍			-4861 Aug 13 j 19:40	0°☾	
	-4866 Dec 22 j 20:06	0°☾		morning rise	-4861 Aug 20 j 13:43	4°☾34'56	
	-4865 Feb 03 j 08:43	0°≈			-4861 Sep 26 j 07:25	0°♏	
evening set	-4865 Feb 28 j 01:57	16°≈51'43			-4861 Nov 07 j 06:17	0°☾	
	-4865 Mar 19 j 17:33	0°☿			-4861 Dec 18 j 01:32	0°♊	
					-4860 Jan 27 j 07:36	0°♋	
conjunction	-4865 Apr 20 j 10:44	20°☿48'02	0°-6'-12	desc. node	-4860 Feb 03 j 07:01	5°♋11'28	
minimum elong	-4865 Apr 20 j 10:59	20°☿48'27	0°06'16		-4860 Mar 08 j 00:53	0°♍	
behind sun begin	-4865 Apr 19 j 15:54	20°☿17'29			-4860 Apr 20 j 04:52	0°☾	
behind sun end	-4865 Apr 21 j 06:04	21°☿19'24			-4860 Jun 11 j 22:58	0°≈	
asc. node	-4865 May 01 j 06:48	27°☿48'54		retrograde	-4860 Jul 24 j 07:55	10°≈39'32	
max. Earth dist.	-4865 May 02 j 22:22	28°☿52'43	2.64514 AU	min. Earth dist.	-4860 Aug 24 j 03:57	4°≈11'03	0.52445 AU
	-4865 May 04 j 16:07	0°♀		greatest brilliancy	-4860 Aug 30 j 01:04	1°≈58'11	-2.0m
morning rise	-4865 Jun 07 j 12:53	21°♀40'48		opposition	-4860 Aug 31 j 13:33	1°≈23'45	-4°-31'-15
	-4865 Jun 20 j 14:57	0°♌			-4860 Sep 04 j 08:01	30°♌☾	
	-4865 Aug 07 j 01:28	0°♎		direct	-4860 Oct 05 j 08:42	23°☾45'30	
	-4865 Sep 23 j 21:26	0°☾			-4860 Nov 08 j 04:38	0°≈	
	-4865 Nov 11 j 22:11	0°♏		asc. node	-4860 Dec 21 j 01:08	18°≈30'17	
	-4864 Jan 04 j 10:42	0°☾			-4859 Jan 11 j 22:52	0°☿	
retrograde	-4864 Mar 15 j 11:14	22°☾24'39			-4859 Mar 05 j 12:08	0°♀	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 5

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4859 Apr 23 j 23:12	0°♄				-4854 May 05 j 01:53	0°♄		
	-4859 Jun 10 j 05:22	0°♂				-4854 Jun 20 j 18:00	0°♄		
evening set	-4859 Jun 27 j 01:11	11°♂02'12				-4854 Aug 11 j 01:36	0°♄		
max. Earth dist.	-4859 Jul 16 j 05:30	23°♂52'11	2.56196 AU	asc. node		-4854 Aug 13 j 04:55	1°♄09'22		
	-4859 Jul 25 j 05:56	0°♄				-4854 Oct 21 j 08:23	0°♂		
				retrograde		-4854 Nov 11 j 03:54	2°♂27'40		
conjunction	-4859 Aug 14 j 15:40	14°♄06'34	1°07'14			-4854 Nov 30 j 16:11	30°♄		
minimum elong	-4859 Aug 14 j 16:41	14°♄08'21	1°07'30	opposition		-4854 Dec 20 j 01:59	23°♄23'13	4°07'32	
	-4859 Sep 06 j 01:58	0°♂		greatest brilliancy		-4854 Dec 20 j 15:31	23°♄09'55	-1.3m	
morning rise	-4859 Oct 04 j 07:32	20°♂33'22		min. Earth dist.		-4854 Dec 23 j 13:03	22°♄01'37	0.65120 AU	
	-4859 Oct 17 j 00:40	0°♄		direct		-4853 Jan 30 j 07:06	13°♄22'28		
	-4859 Nov 25 j 14:47	0°♂				-4853 Mar 30 j 22:51	0°♂		
desc. node	-4859 Dec 21 j 05:23	19°♂43'16				-4853 May 23 j 18:36	0°♄		
	-4858 Jan 03 j 12:43	0°♄				-4853 Jul 07 j 17:12	0°♂		
	-4858 Feb 11 j 14:41	0°♄		desc. node		-4853 Aug 12 j 21:07	26°♂18'37		
	-4858 Mar 23 j 21:28	0°♄				-4853 Aug 17 j 19:04	0°♄		
	-4858 May 05 j 20:33	0°♄				-4853 Sep 25 j 20:19	0°♂		
	-4858 Jun 23 j 23:20	0°♄				-4853 Nov 03 j 03:08	0°♄		
retrograde	-4858 Sep 02 j 09:06	23°♄23'55				-4853 Dec 11 j 16:52	0°♄		
min. Earth dist.	-4858 Oct 08 j 05:16	15°♄04'20	0.62527 AU	evening set		-4853 Dec 13 j 00:01	0°♄59'49		
opposition	-4858 Oct 12 j 06:55	13°♄26'41	-1°-4'-9			-4852 Jan 20 j 10:32	0°♄		
greatest brilliancy	-4858 Oct 12 j 01:47	13°♄31'49	-1.5m						
asc. node	-4858 Nov 08 j 02:13	5°♄17'36		conjunction		-4852 Feb 13 j 00:15	17°♄12'22	-1°-4'-21	
direct	-4858 Nov 19 j 13:11	4°♄26'19		minimum elong		-4852 Feb 13 j 01:52	17°♄15'16	1°04'35	
	-4857 Feb 07 j 10:21	0°♄				-4852 Mar 01 j 23:17	0°♄		
	-4857 Apr 03 j 01:33	0°♄				-4852 Mar 22 j 22:02	14°♄34'55	2.52199 AU	
	-4857 May 21 j 23:50	0°♂		max. Earth dist.		-4852 Apr 10 j 15:31	27°♄19'31		
	-4857 Jul 06 j 10:57	0°♄		morning rise		-4852 Apr 14 j 15:05	0°♄		
evening set	-4857 Aug 10 j 18:14	24°♄41'26				-4852 May 30 j 10:39	0°♄		
	-4857 Aug 18 j 03:13	0°♂		asc. node		-4852 Jun 30 j 02:38	19°♄19'48		
max. Earth dist.	-4857 Aug 27 j 00:34	6°♂28'03	2.44333 AU			-4852 Jul 17 j 11:10	0°♄		
	-4857 Sep 27 j 14:49	0°♄				-4852 Sep 06 j 16:12	0°♂		
						-4852 Nov 07 j 07:44	0°♄		
conjunction	-4857 Oct 04 j 12:22	5°♄14'20	0°24'19	retrograde		-4852 Dec 21 j 13:32	9°♄38'21		
minimum elong	-4857 Oct 04 j 13:58	5°♄17'22	0°24'24	opposition		-4851 Jan 27 j 06:30	1°♄40'08	5°18'16	
	-4857 Nov 05 j 15:01	0°♂		greatest brilliancy		-4851 Jan 28 j 22:59	1°♄02'27	-1.7m	
desc. node	-4857 Nov 08 j 01:13	1°♄53'23				-4851 Jan 31 j 18:00	30°♄		
morning rise	-4857 Dec 05 j 02:29	23°♄03'13		min. Earth dist.		-4851 Feb 03 j 09:22	29°♄01'36	0.57006 AU	
	-4857 Dec 13 j 23:11	0°♄		direct		-4851 Mar 08 j 11:59	22°♄07'30		
	-4856 Jan 21 j 12:12	0°♄				-4851 Apr 14 j 19:18	0°♄		
	-4856 Mar 01 j 03:09	0°♄				-4851 Jun 10 j 14:54	0°♂		
	-4856 Apr 11 j 17:21	0°♄		desc. node		-4851 Jun 29 j 20:00	12°♄38'14		
	-4856 May 26 j 09:00	0°♄				-4851 Jul 24 j 13:42	0°♄		
	-4856 Jul 15 j 12:14	0°♄				-4851 Sep 02 j 21:08	0°♄		
asc. node	-4856 Sep 25 j 04:23	27°♄51'44				-4851 Oct 11 j 23:17	0°♄		
retrograde	-4856 Oct 06 j 12:36	28°♄39'25				-4851 Nov 20 j 05:32	0°♄		
opposition	-4856 Nov 15 j 11:42	18°♄55'44	1°52'38			-4851 Dec 30 j 14:58	0°♄		
greatest brilliancy	-4856 Nov 15 j 09:45	18°♄57'42	-1.3m	evening set		-4850 Feb 08 j 23:21	28°♄45'54		
min. Earth dist.	-4856 Nov 15 j 03:38	19°♄03'50	0.66964 AU			-4850 Feb 10 j 17:53	0°♄		
direct	-4856 Dec 25 j 21:23	9°♄10'45				-4850 Mar 26 j 19:23	0°♄		
	-4855 Mar 05 j 22:19	0°♄							
	-4855 Apr 29 j 12:55	0°♂		conjunction		-4850 Apr 03 j 16:56	5°♄15'00	0°-24'-57	
	-4855 Jun 15 j 14:52	0°♄		minimum elong		-4850 Apr 03 j 18:03	5°♄16'50	0°25'04	
	-4855 Jul 28 j 17:25	0°♂		max. Earth dist.		-4850 Apr 23 j 00:34	17°♄56'59	2.62029 AU	
	-4855 Sep 07 j 04:10	0°♄				-4850 May 11 j 14:17	0°♄		
desc. node	-4855 Sep 24 j 22:35	13°♄37'24		asc. node		-4850 May 17 j 23:39	4°♄06'49		
evening set	-4855 Oct 05 j 16:18	21°♄57'21		morning rise		-4850 May 23 j 16:05	7°♄45'41		
	-4855 Oct 15 j 23:31	0°♄				-4850 Jun 27 j 15:46	0°♄		
	-4855 Nov 23 j 02:39	0°♄				-4850 Aug 14 j 15:37	0°♂		
						-4850 Oct 02 j 22:35	0°♄		
conjunction	-4855 Dec 08 j 21:51	12°♄24'36	0°-49'-18			-4850 Nov 24 j 22:58	0°♂		
minimum elong	-4855 Dec 08 j 18:31	12°♄18'04	0°49'26	retrograde		-4849 Feb 15 j 20:49	27°♄51'00		
	-4855 Dec 31 j 12:06	0°♄		opposition		-4849 Mar 20 j 16:37	21°♄41'38	3°33'55	
max. Earth dist.	-4854 Jan 19 j 18:46	14°♄46'45	2.39446 AU	greatest brilliancy		-4849 Mar 22 j 06:56	21°♄11'04	-2.4m	
	-4854 Feb 09 j 00:26	0°♄		min. Earth dist.		-4849 Mar 28 j 17:12	19°♄08'57	0.44398 AU	
morning rise	-4854 Feb 14 j 02:30	3°♄46'25		direct		-4849 Apr 25 j 12:23	14°♄16'07		
	-4854 Mar 22 j 08:34	0°♄		desc. node		-4849 May 17 j 20:50	17°♄32'09		

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 6

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4849 Jun 17 j 07:40	0° \mathfrak{M}		minimum elong	-4844 Jul 28 j 21:20	27° \mathfrak{H} 43'13	1°11'33
	-4849 Aug 05 j 08:38	0° \mathfrak{L}			-4844 Aug 01 j 05:46	0° \mathfrak{S}	
	-4849 Sep 16 j 22:48	0° \mathfrak{M}			-4844 Sep 13 j 06:43	0° \mathfrak{Q}	
	-4849 Oct 28 j 09:57	0° \mathfrak{J}		morning rise	-4844 Sep 15 j 02:25	1° \mathfrak{Q} 17'56	
	-4849 Dec 09 j 11:17	0° \mathfrak{Z}			-4844 Oct 24 j 13:00	0° \mathfrak{M}	
	-4848 Jan 21 j 21:12	0° \approx			-4844 Dec 03 j 11:58	0° \mathfrak{L}	
	-4848 Mar 06 j 21:02	0° \mathfrak{H}		desc. node	-4843 Jan 06 j 23:16	26° \mathfrak{L} 18'37	
evening set	-4848 Mar 26 j 00:37	12° \mathfrak{H} 29'42			-4843 Jan 11 j 19:02	0° \mathfrak{M}	
asc. node	-4848 Apr 03 j 20:00	18° \mathfrak{H} 11'53			-4843 Feb 20 j 06:42	0° \mathfrak{J}	
	-4848 Apr 22 j 03:48	0° \mathfrak{Y}			-4843 Apr 02 j 03:59	0° \mathfrak{Z}	
					-4843 May 16 j 14:08	0° \approx	
conjunction	-4848 May 13 j 20:15	13° \mathfrak{Y} 52'55	0°22'12		-4843 Jul 12 j 00:10	0° \mathfrak{H}	
minimum elong	-4848 May 13 j 19:26	13° \mathfrak{Y} 51'38	0°22'14	retrograde	-4843 Aug 18 j 18:17	8° \mathfrak{H} 17'04	
max. Earth dist.	-4848 May 16 j 19:22	15° \mathfrak{Y} 46'29	2.66694 AU	min. Earth dist.	-4843 Sep 21 j 19:08	0° \mathfrak{H} 36'02	0.59185 AU
	-4848 Jun 08 j 02:29	0° \mathfrak{B}			-4843 Sep 23 j 07:49	30° \mathfrak{R} \approx	
morning rise	-4848 Jun 29 j 01:46	13° \mathfrak{B} 23'06		opposition	-4843 Sep 27 j 06:34	28° \approx 26'16	-2°-22'-42
	-4848 Jul 25 j 00:27	0° \mathfrak{H}		greatest brilliancy	-4843 Sep 26 j 15:39	28° \approx 41'01	-1.6m
	-4848 Sep 09 j 11:42	0° \mathfrak{S}		direct	-4843 Nov 03 j 08:25	19° \approx 52'24	
	-4848 Oct 25 j 13:14	0° \mathfrak{Q}		asc. node	-4843 Nov 24 j 16:52	22° \approx 29'35	
	-4848 Dec 10 j 17:22	0° \mathfrak{M}			-4843 Dec 18 j 13:20	0° \mathfrak{H}	
	-4847 Jan 27 j 11:02	0° \mathfrak{L}			-4842 Feb 18 j 10:56	0° \mathfrak{Y}	
	-4847 Mar 25 j 02:56	0° \mathfrak{M}			-4842 Apr 11 j 06:55	0° \mathfrak{B}	
desc. node	-4847 Apr 03 j 23:27	3° \mathfrak{M} 40'22			-4842 May 29 j 09:16	0° \mathfrak{H}	
retrograde	-4847 May 03 j 19:22	9° \mathfrak{M} 03'45			-4842 Jul 13 j 14:51	0° \mathfrak{S}	
min. Earth dist.	-4847 Jun 01 j 12:32	4° \mathfrak{M} 23'30	0.37889 AU	evening set	-4842 Jul 23 j 06:42	6° \mathfrak{S} 38'27	
opposition	-4847 Jun 03 j 20:49	3° \mathfrak{M} 45'27	-4°-22'-13	max. Earth dist.	-4842 Aug 07 j 12:44	17° \mathfrak{S} 17'58	2.49280 AU
greatest brilliancy	-4847 Jun 03 j 07:21	3° \mathfrak{M} 54'33	-2.9m		-4842 Aug 25 j 07:55	0° \mathfrak{Q}	
	-4847 Jun 19 j 21:00	30° \mathfrak{R} \mathfrak{L}					
direct	-4847 Jul 03 j 18:01	28° \mathfrak{L} 45'03		conjunction	-4842 Sep 12 j 22:48	13° \mathfrak{Q} 35'03	0°47'02
	-4847 Jul 17 j 16:14	0° \mathfrak{M}		minimum elong	-4842 Sep 13 j 00:52	13° \mathfrak{Q} 38'50	0°47'13
	-4847 Sep 25 j 01:32	0° \mathfrak{J}			-4842 Oct 04 j 23:05	0° \mathfrak{M}	
	-4847 Nov 12 j 23:13	0° \mathfrak{Z}		morning rise	-4842 Nov 08 j 13:16	26° \mathfrak{M} 26'23	
	-4847 Dec 29 j 22:36	0° \approx			-4842 Nov 13 j 03:42	0° \mathfrak{L}	
	-4846 Feb 15 j 00:22	0° \mathfrak{H}		desc. node	-4842 Nov 24 j 21:21	9° \mathfrak{L} 06'55	
asc. node	-4846 Feb 19 j 17:00	2° \mathfrak{H} 58'34			-4842 Dec 21 j 15:57	0° \mathfrak{M}	
	-4846 Apr 03 j 11:06	0° \mathfrak{Y}			-4841 Jan 29 j 08:09	0° \mathfrak{J}	
evening set	-4846 May 04 j 19:58	19° \mathfrak{Y} 49'38			-4841 Mar 10 j 02:24	0° \mathfrak{Z}	
	-4846 May 20 j 20:27	0° \mathfrak{B}			-4841 Apr 20 j 23:25	0° \approx	
max. Earth dist.	-4846 Jun 09 j 19:40	12° \mathfrak{B} 45'29	2.65923 AU		-4841 Jun 05 j 12:23	0° \mathfrak{H}	
					-4841 Jul 29 j 15:20	0° \mathfrak{Y}	
conjunction	-4846 Jun 20 j 16:20	19° \mathfrak{B} 44'48	0°58'09	retrograde	-4841 Sep 24 j 02:25	15° \mathfrak{Y} 35'10	
minimum elong	-4846 Jun 20 j 15:06	19° \mathfrak{B} 42'48	0°58'19	asc. node	-4841 Oct 12 j 18:14	13° \mathfrak{Y} 14'00	
	-4846 Jul 06 j 12:06	0° \mathfrak{H}		min. Earth dist.	-4841 Nov 01 j 09:12	6° \mathfrak{Y} 25'55	0.65961 AU
morning rise	-4846 Aug 05 j 04:06	19° \mathfrak{H} 30'01		opposition	-4841 Nov 03 j 04:27	5° \mathfrak{Y} 42'27	0°48'54
	-4846 Aug 20 j 21:25	0° \mathfrak{S}		greatest brilliancy	-4841 Nov 03 j 02:06	5° \mathfrak{Y} 44'48	-1.3m
	-4846 Oct 03 j 20:09	0° \mathfrak{Q}			-4841 Nov 18 j 15:31	30° \mathfrak{R} \mathfrak{H}	
	-4846 Nov 15 j 11:13	0° \mathfrak{M}		direct	-4841 Dec 12 j 21:31	26° \mathfrak{H} 11'24	
	-4846 Dec 27 j 03:18	0° \mathfrak{L}			-4840 Jan 08 j 08:34	0° \mathfrak{Y}	
	-4845 Feb 06 j 11:47	0° \mathfrak{M}			-4840 Mar 17 j 14:11	0° \mathfrak{B}	
desc. node	-4845 Feb 19 j 23:52	9° \mathfrak{M} 42'14			-4840 May 08 j 00:51	0° \mathfrak{H}	
	-4845 Mar 20 j 21:56	0° \mathfrak{J}			-4840 Jun 23 j 07:00	0° \mathfrak{S}	
	-4845 May 07 j 12:19	0° \mathfrak{Z}			-4840 Aug 05 j 04:07	0° \mathfrak{Q}	
retrograde	-4845 Jul 06 j 15:35	19° \mathfrak{Z} 53'45		evening set	-4840 Sep 11 j 13:30	27° \mathfrak{Q} 41'40	
min. Earth dist.	-4845 Aug 04 j 08:14	14° \mathfrak{Z} 17'58	0.47465 AU		-4840 Sep 14 j 14:28	0° \mathfrak{M}	
greatest brilliancy	-4845 Aug 10 j 08:55	12° \mathfrak{Z} 10'03	-2.2m	desc. node	-4840 Oct 11 j 17:14	20° \mathfrak{M} 50'47	
opposition	-4845 Aug 12 j 09:42	11° \mathfrak{Z} 26'37	-5°-44'-1		-4840 Oct 23 j 11:05	0° \mathfrak{L}	
direct	-4845 Sep 14 j 11:21	4° \mathfrak{Z} 35'10		max. Earth dist.	-4840 Oct 26 j 16:31	2° \mathfrak{L} 31'28	2.38000 AU
	-4845 Nov 30 j 09:57	0° \approx					
asc. node	-4844 Jan 07 j 16:13	20° \approx 56'12		conjunction	-4840 Nov 11 j 08:08	14° \mathfrak{L} 48'39	0°-22'00
	-4844 Jan 23 j 08:42	0° \mathfrak{H}		minimum elong	-4840 Nov 11 j 06:14	14° \mathfrak{L} 44'56	0°22'02
	-4844 Mar 13 j 14:51	0° \mathfrak{Y}			-4840 Nov 30 j 15:29	0° \mathfrak{M}	
	-4844 May 01 j 05:34	0° \mathfrak{B}			-4839 Jan 08 j 01:18	0° \mathfrak{J}	
evening set	-4844 Jun 11 j 09:32	26° \mathfrak{B} 13'42		morning rise	-4839 Jan 17 j 18:22	7° \mathfrak{J} 28'35	
	-4844 Jun 17 j 04:51	0° \mathfrak{H}			-4839 Feb 16 j 13:14	0° \mathfrak{Z}	
max. Earth dist.	-4844 Jul 04 j 11:47	11° \mathfrak{H} 21'30	2.59895 AU		-4839 Mar 29 j 21:32	0° \approx	
					-4839 May 12 j 18:59	0° \mathfrak{H}	
conjunction	-4844 Jul 28 j 21:13	27° \mathfrak{H} 43'00	1°11'18		-4839 Jun 29 j 05:29	0° \mathfrak{Y}	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 7

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4839 Aug 22 j 19:56	0°♄				-4834 Nov 06 j 13:41	0°♄		
asc. node	-4839 Aug 29 j 19:41	3°♄16'25				-4834 Dec 17 j 17:57	0°♄		
retrograde	-4839 Oct 27 j 23:15	19°♄23'27				-4833 Jan 29 j 12:11	0°♄		
opposition	-4839 Dec 06 j 10:10	10°♄00'59	3°20'53	evening set		-4833 Mar 10 j 04:57	26°♄48'05		
greatest brilliancy	-4839 Dec 06 j 15:35	9°♄55'36	-1.3m			-4833 Mar 15 j 00:49	0°♄		
min. Earth dist.	-4839 Dec 08 j 09:36	9°♄13'53	0.66595 AU	asc. node		-4833 Apr 21 j 12:26	24°♄29'32		
direct	-4838 Jan 16 j 11:56	0°♄02'36							
	-4838 Apr 13 j 03:46	0°♄		conjunction		-4833 Apr 29 j 12:32	29°♄39'30	0°04'35	
	-4838 Jun 01 j 23:59	0°♄		minimum elong		-4833 Apr 29 j 12:20	29°♄39'12	0°04'34	
	-4838 Jul 15 j 23:05	0°♄		behind sun begin		-4833 Apr 28 j 16:52	29°♄07'50		
	-4838 Aug 25 j 16:42	0°♄		behind sun end		-4833 Apr 30 j 07:49	0°♄10'33		
desc. node	-4838 Aug 29 j 14:09	2°♄57'18				-4833 Apr 30 j 01:16	0°♄		
	-4838 Oct 03 j 14:21	0°♄		max. Earth dist.		-4833 May 08 j 13:02	5°♄27'32	2.65519 AU	
	-4838 Nov 10 j 18:44	0°♄		morning rise		-4833 Jun 15 j 19:43	29°♄54'14		
evening set	-4838 Nov 16 j 06:40	4°♄19'10				-4833 Jun 15 j 23:20	0°♄		
greatest brilliancy	-4838 Nov 21 j 16:22	8°♄33'29	1.2m			-4833 Aug 02 j 04:21	0°♄		
	-4838 Dec 19 j 05:45	0°♄				-4833 Sep 18 j 10:20	0°♄		
						-4833 Nov 05 j 02:39	0°♄		
conjunction	-4837 Jan 19 j 23:22	24°♄08'05	-1°-8'-22			-4833 Dec 24 j 18:11	0°♄		
minimum elong	-4837 Jan 19 j 23:05	24°♄07'34	1°08'39			-4832 Feb 22 j 04:57	0°♄		
	-4837 Jan 27 j 20:12	0°♄		retrograde		-4832 Apr 02 j 08:36	8°♄40'11		
max. Earth dist.	-4837 Mar 07 j 02:46	27°♄47'12	2.47219 AU	desc. node		-4832 Apr 20 j 14:43	6°♄37'47		
	-4837 Mar 10 j 05:47	0°♄		opposition		-4832 May 02 j 21:22	3°♄34'23	0°-55'-28	
morning rise	-4837 Mar 22 j 17:16	8°♄45'03		greatest brilliancy		-4832 May 03 j 00:35	3°♄32'12	-2.8m	
	-4837 Apr 22 j 20:04	0°♄		min. Earth dist.		-4832 May 06 j 02:01	2°♄42'26	0.38448 AU	
	-4837 Jun 07 j 19:45	0°♄				-4832 May 17 j 01:50	30°♄		
asc. node	-4837 Jul 17 j 19:27	24°♄44'07		direct		-4832 Jun 03 j 06:30	28°♄07'15		
	-4837 Jul 26 j 15:14	0°♄				-4832 Jun 20 j 05:23	0°♄		
	-4837 Sep 18 j 18:36	0°♄				-4832 Aug 24 j 06:57	0°♄		
retrograde	-4837 Dec 05 j 07:49	24°♄35'11				-4832 Oct 09 j 21:26	0°♄		
opposition	-4836 Jan 12 j 01:32	16°♄06'50	5°01'52			-4832 Nov 23 j 14:18	0°♄		
greatest brilliancy	-4836 Jan 13 j 07:17	15°♄38'21	-1.5m			-4831 Jan 07 j 15:25	0°♄		
min. Earth dist.	-4836 Jan 17 j 19:52	13°♄54'41	0.60899 AU			-4831 Feb 22 j 15:55	0°♄		
direct	-4836 Feb 21 j 23:13	6°♄15'17		asc. node		-4831 Mar 08 j 09:01	8°♄49'13		
	-4836 May 03 j 22:25	0°♄				-4831 Apr 10 j 12:56	0°♄		
	-4836 Jun 21 j 16:36	0°♄		evening set		-4831 Apr 19 j 18:28	5°♄52'16		
desc. node	-4836 Jul 16 j 13:20	17°♄18'33				-4831 May 27 j 16:33	0°♄		
	-4836 Aug 02 j 23:36	0°♄		max. Earth dist.		-4831 May 31 j 12:13	2°♄26'15	2.66888 AU	
	-4836 Sep 11 j 14:14	0°♄							
	-4836 Oct 20 j 05:50	0°♄		conjunction		-4831 Jun 06 j 01:44	5°♄59'31	0°46'17	
	-4836 Nov 28 j 03:14	0°♄		minimum elong		-4831 Jun 06 j 00:27	5°♄57'28	0°46'24	
	-4835 Jan 07 j 04:30	0°♄				-4831 Jul 13 j 09:15	0°♄		
evening set	-4835 Jan 18 j 21:24	8°♄32'18		morning rise		-4831 Jul 21 j 11:39	5°♄15'42		
	-4835 Feb 18 j 00:13	0°♄				-4831 Aug 28 j 02:30	0°♄		
						-4831 Oct 11 j 16:21	0°♄		
conjunction	-4835 Mar 16 j 12:57	18°♄19'08	0°-42'-54			-4831 Nov 24 j 06:23	0°♄		
minimum elong	-4835 Mar 16 j 14:47	18°♄22'16	0°43'05			-4830 Jan 06 j 06:32	0°♄		
	-4835 Apr 02 j 20:19	0°♄				-4830 Feb 18 j 14:58	0°♄		
max. Earth dist.	-4835 Apr 12 j 02:53	6°♄10'43	2.58774 AU	desc. node		-4830 Mar 08 j 17:54	12°♄07'31		
morning rise	-4835 May 07 j 22:54	23°♄07'58				-4830 Apr 06 j 06:05	0°♄		
	-4835 May 18 j 13:39	0°♄		retrograde		-4830 Jun 15 j 02:55	25°♄27'00		
asc. node	-4835 Jun 03 j 16:19	10°♄19'24		min. Earth dist.		-4830 Jul 12 j 02:05	20°♄39'20	0.42605 AU	
	-4835 Jul 04 j 20:34	0°♄		greatest brilliancy		-4830 Jul 17 j 14:14	18°♄53'48	-2.5m	
	-4835 Aug 22 j 16:13	0°♄		opposition		-4830 Jul 19 j 16:34	18°♄13'07	-6°-23'-12	
	-4835 Oct 13 j 08:00	0°♄		direct		-4830 Aug 20 j 02:01	12°♄14'50		
	-4835 Dec 16 j 00:30	0°♄				-4830 Oct 19 j 11:47	0°♄		
retrograde	-4834 Jan 22 j 08:45	7°♄10'43				-4830 Dec 13 j 10:36	0°♄		
opposition	-4834 Feb 25 j 21:09	0°♄13'21	4°50'55	asc. node		-4829 Jan 24 j 06:41	25°♄02'00		
	-4834 Feb 26 j 12:39	30°♄				-4829 Feb 01 j 10:40	0°♄		
greatest brilliancy	-4834 Feb 27 j 22:01	29°♄31'08	-2.1m			-4829 Mar 22 j 06:33	0°♄		
min. Earth dist.	-4834 Mar 06 j 07:53	27°♄19'00	0.49530 AU			-4829 May 09 j 06:53	0°♄		
direct	-4834 Apr 05 j 00:26	21°♄41'31		evening set		-4829 May 28 j 07:30	12°♄05'11		
	-4834 May 12 j 07:55	0°♄		max. Earth dist.		-4829 Jun 25 j 03:27	0°♄02'44	2.62866 AU	
desc. node	-4834 Jun 03 j 13:22	10°♄35'03				-4829 Jun 25 j 01:46	0°♄		
	-4834 Jul 05 j 18:46	0°♄							
	-4834 Aug 17 j 20:00	0°♄		conjunction		-4829 Jul 14 j 04:37	12°♄33'53	1°09'43	
	-4834 Sep 27 j 07:55	0°♄		minimum elong		-4829 Jul 14 j 04:01	12°♄32'54	1°09'57	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 8

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4829 Aug 09 j 04:55	0°☾		asc. node	-4824 Sep 15 j 10:44	1°♄53'28	
morning rise	-4829 Aug 29 j 19:25	14°☾06'42		retrograde	-4824 Oct 14 j 07:06	6°♄30'44	
	-4829 Sep 21 j 12:54	0°♂			-4824 Nov 15 j 04:43	30°♄	
	-4829 Nov 02 j 05:43	0°♄		opposition	-4824 Nov 23 j 02:54	26°♄53'48	2°27'01
	-4829 Dec 12 j 17:04	0°♂		greatest brilliancy	-4824 Nov 23 j 02:45	26°♄53'58	-1.3m
	-4828 Jan 21 j 13:37	0°♂		min. Earth dist.	-4824 Nov 23 j 14:53	26°♄41'49	0.67098 AU
desc. node	-4828 Jan 24 j 17:38	2°♂23'12		direct	-4823 Jan 02 j 19:32	17°♄02'51	
	-4828 Mar 01 j 17:07	0°♄			-4823 Feb 24 j 07:19	0°♄	
	-4828 Apr 12 j 17:08	0°♄			-4823 Apr 23 j 12:34	0°♂	
	-4828 May 30 j 11:26	0°♄			-4823 Jun 10 j 10:01	0°☾	
retrograde	-4828 Aug 03 j 00:44	21°♄33'29			-4823 Jul 23 j 19:34	0°♂	
min. Earth dist.	-4828 Sep 04 j 00:41	14°♄37'51	0.55002 AU		-4823 Sep 02 j 09:00	0°♄	
opposition	-4828 Sep 10 j 19:47	12°♄00'56	-3°-44'-44	desc. node	-4823 Sep 15 j 08:24	9°♄54'47	
greatest brilliancy	-4828 Sep 09 j 15:33	12°♄28'09	-1.8m		-4823 Oct 11 j 05:15	0°♂	
direct	-4828 Oct 16 j 12:00	4°♄00'43		evening set	-4823 Oct 20 j 07:03	7°♄06'55	
asc. node	-4828 Dec 11 j 06:35	18°♄41'22			-4823 Nov 18 j 08:41	0°♂	
	-4827 Jan 04 j 02:48	0°♄					
	-4827 Feb 27 j 19:55	0°♄		conjunction	-4823 Dec 24 j 11:21	28°♂14'05	-1°00'5
	-4827 Apr 19 j 00:11	0°♄		minimum elong	-4823 Dec 24 j 08:36	28°♂08'46	1°00'16
	-4827 Jun 05 j 13:06	0°♂			-4823 Dec 26 j 18:07	0°♄	
evening set	-4827 Jul 06 j 07:26	20°♂17'07			-4822 Feb 04 j 06:10	0°♄	
	-4827 Jul 20 j 15:41	0°☾		max. Earth dist.	-4822 Feb 10 j 23:47	4°♄59'32	2.42016 AU
max. Earth dist.	-4827 Jul 23 j 14:53	2°☾01'50	2.53876 AU	morning rise	-4822 Feb 28 j 03:49	17°♄32'39	
					-4822 Mar 17 j 13:36	0°♄	
conjunction	-4827 Aug 24 j 18:54	24°☾30'52	1°01'58		-4822 Apr 30 j 04:04	0°♄	
minimum elong	-4827 Aug 24 j 20:24	24°☾33'32	1°02'12		-4822 Jun 15 j 11:42	0°♄	
	-4827 Sep 01 j 10:55	0°♂		asc. node	-4822 Aug 03 j 10:36	29°♄21'08	
	-4827 Oct 12 j 07:01	0°♄			-4822 Aug 04 j 14:00	0°♄	
morning rise	-4827 Oct 16 j 05:48	2°♄57'54			-4822 Oct 04 j 00:50	0°♂	
	-4827 Nov 20 j 17:34	0°♂		retrograde	-4822 Nov 19 j 15:45	10°♂36'00	
desc. node	-4827 Dec 11 j 14:48	16°♂08'21		opposition	-4822 Dec 28 j 05:03	1°♂43'15	4°30'33
	-4827 Dec 29 j 11:46	0°♂		greatest brilliancy	-4822 Dec 29 j 00:05	1°♂24'41	-1.4m
	-4826 Feb 06 j 09:28	0°♄			-4821 Jan 01 j 15:04	30°♄	
	-4826 Mar 18 j 10:09	0°♄		min. Earth dist.	-4821 Jan 01 j 12:27	0°♂02'32	0.63871 AU
	-4826 Apr 29 j 20:11	0°♄		direct	-4821 Feb 07 j 09:34	21°♄43'35	
	-4826 Jun 16 j 01:49	0°♄			-4821 Mar 19 j 00:07	0°♂	
	-4826 Aug 23 j 15:32	0°♄			-4821 May 17 j 04:58	0°☾	
retrograde	-4826 Sep 10 j 10:45	1°♄58'09			-4821 Jul 02 j 03:25	0°♂	
	-4826 Sep 27 j 08:38	30°♄		desc. node	-4821 Aug 03 j 06:02	23°♂03'30	
min. Earth dist.	-4826 Oct 17 j 05:01	23°♄19'30	0.63994 AU		-4821 Aug 12 j 13:57	0°♄	
opposition	-4826 Oct 20 j 11:07	22°♄01'08	0°-20'-59		-4821 Sep 20 j 19:14	0°♂	
greatest brilliancy	-4826 Oct 20 j 09:44	22°♄02'31	-1.4m		-4821 Oct 29 j 04:40	0°♂	
asc. node	-4826 Oct 29 j 08:37	18°♄34'19			-4821 Dec 06 j 20:28	0°♄	
direct	-4826 Nov 28 j 06:55	12°♄48'33		evening set	-4821 Dec 27 j 09:19	15°♄37'04	
	-4825 Jan 29 j 17:58	0°♄			-4820 Jan 15 j 15:55	0°♄	
	-4825 Mar 28 j 06:45	0°♄					
	-4825 May 16 j 23:17	0°♂		conjunction	-4820 Feb 25 j 10:46	29°♄25'51	0°-58'-4
	-4825 Jul 01 j 17:04	0°☾		minimum elong	-4820 Feb 25 j 12:47	29°♄29'24	0°58'17
	-4825 Aug 13 j 11:30	0°♂			-4820 Feb 26 j 06:10	0°♄	
evening set	-4825 Aug 22 j 00:08	6°♂11'52		max. Earth dist.	-4820 Mar 30 j 18:57	23°♄09'50	2.54736 AU
max. Earth dist.	-4825 Sep 11 j 01:53	21°♂03'02	2.41697 AU		-4820 Apr 09 j 22:13	0°♄	
	-4825 Sep 22 j 22:58	0°♄		morning rise	-4820 Apr 21 j 00:17	7°♄23'37	
					-4820 May 25 j 15:38	0°♄	
conjunction	-4825 Oct 17 j 18:50	19°♄01'31	0°08'29	asc. node	-4820 Jun 20 j 08:48	16°♄20'19	
minimum elong	-4825 Oct 17 j 19:30	19°♄02'47	0°08'32		-4820 Jul 12 j 07:36	0°♄	
behind sun begin	-4825 Oct 16 j 21:21	18°♄19'57			-4820 Aug 31 j 09:53	0°♂	
behind sun end	-4825 Oct 18 j 17:39	19°♄45'38			-4820 Oct 26 j 13:56	0°☾	
desc. node	-4825 Oct 29 j 11:31	28°♄06'27		retrograde	-4819 Jan 01 j 06:29	19°☾17'34	
	-4825 Oct 31 j 21:48	0°♂		opposition	-4819 Feb 06 j 06:50	11°☾38'51	5°17'28
	-4825 Dec 09 j 04:17	0°♂		greatest brilliancy	-4819 Feb 08 j 04:22	10°☾57'22	-1.8m
morning rise	-4825 Dec 21 j 00:28	9°♂17'02		min. Earth dist.	-4819 Feb 14 j 01:14	8°☾49'32	0.54513 AU
	-4824 Jan 16 j 15:27	0°♄		direct	-4819 Mar 17 j 22:50	2°☾22'17	
	-4824 Feb 25 j 04:12	0°♄			-4819 Jun 02 j 07:03	0°♂	
	-4824 Apr 06 j 14:46	0°♄		desc. node	-4819 Jun 20 j 06:36	11°♂08'02	
	-4824 May 20 j 20:47	0°♄			-4819 Jul 18 j 02:43	0°♄	
	-4824 Jul 08 j 15:24	0°♄			-4819 Aug 28 j 01:55	0°♂	
	-4824 Sep 09 j 10:53	0°♄			-4819 Oct 06 j 12:45	0°♂	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 9

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4819 Nov 15 j 01:07	0°♂		morning rise	-4814 Aug 13 j 20:54	28°♂25'01	
	-4819 Dec 25 j 15:24	0°♂			-4814 Aug 16 j 05:19	0°♂	
	-4818 Feb 05 j 22:25	0°♂			-4814 Sep 28 j 22:30	0°♂	
evening set	-4818 Feb 20 j 02:26	9°♂45'37			-4814 Nov 10 j 04:53	0°♂	
	-4818 Mar 22 j 02:41	0°♂			-4814 Dec 21 j 08:53	0°♂	
					-4813 Jan 31 j 01:14	0°♂	
conjunction	-4818 Apr 13 j 10:34	14°♂43'54	0°-14'-5	desc. node	-4813 Feb 10 j 10:46	7°♂38'33	
minimum elong	-4818 Apr 13 j 11:11	14°♂44'54	0°14'11		-4813 Mar 13 j 08:11	0°♂	
behind sun begin	-4818 Apr 13 j 01:59	14°♂29'51			-4813 Apr 26 j 18:17	0°♂	
behind sun end	-4818 Apr 13 j 20:24	14°♂59'57			-4813 Jun 28 j 10:34	0°♂	
max. Earth dist.	-4818 Apr 28 j 23:03	24°♂50'10	2.63517 AU	retrograde	-4813 Jul 17 j 13:57	2°♂29'34	
	-4818 May 06 j 22:43	0°♂			-4813 Aug 05 j 03:44	30°♂	
asc. node	-4818 May 08 j 04:47	0°♂48'30		min. Earth dist.	-4813 Aug 16 j 10:12	26°♂24'58	0.50243 AU
morning rise	-4818 Jun 01 j 06:51	16°♂15'05		greatest brilliancy	-4813 Aug 22 j 11:13	24°♂11'51	-2.1m
	-4818 Jun 22 j 21:59	0°♂		opposition	-4813 Aug 24 j 05:41	23°♂32'41	-5°-4'-42
	-4818 Aug 09 j 13:26	0°♂		direct	-4813 Sep 27 j 07:14	16°♂14'15	
	-4818 Sep 26 j 22:45	0°♂			-4813 Nov 19 j 08:22	0°♂	
	-4818 Nov 16 j 08:22	0°♂		asc. node	-4813 Dec 28 j 22:10	19°♂33'51	
	-4817 Jan 14 j 04:42	0°♂			-4812 Jan 16 j 20:37	0°♂	
retrograde	-4817 Mar 03 j 09:04	11°♂34'11			-4812 Mar 08 j 07:33	0°♂	
opposition	-4817 Apr 04 j 08:04	5°♂51'44	2°18'02		-4812 Apr 26 j 09:43	0°♂	
greatest brilliancy	-4817 Apr 05 j 07:42	5°♂33'58	-2.6m		-4812 Jun 12 j 13:31	0°♂	
min. Earth dist.	-4817 Apr 11 j 08:49	3°♂45'45	0.41833 AU	evening set	-4812 Jun 20 j 06:55	5°♂02'27	
	-4817 Apr 27 j 14:22	30°♂		max. Earth dist.	-4812 Jul 11 j 03:39	18°♂51'37	2.57942 AU
direct	-4817 May 08 j 13:04	29°♂10'16			-4812 Jul 27 j 15:23	0°♂	
desc. node	-4817 May 08 j 08:27	29°♂10'17					
	-4817 May 19 j 14:50	0°♂		conjunction	-4812 Aug 07 j 07:28	7°♂19'07	1°09'43
	-4817 Jul 26 j 15:23	0°♂		minimum elong	-4812 Aug 07 j 08:06	7°♂20'13	1°09'57
	-4817 Sep 09 j 15:41	0°♂			-4812 Sep 08 j 14:36	0°♂	
	-4817 Oct 22 j 05:19	0°♂		morning rise	-4812 Sep 25 j 17:54	12°♂21'23	
	-4817 Dec 03 j 22:17	0°♂			-4812 Oct 19 j 17:33	0°♂	
	-4816 Jan 16 j 18:39	0°♂			-4812 Nov 28 j 11:55	0°♂	
	-4816 Mar 02 j 01:09	0°♂		desc. node	-4812 Dec 28 j 09:28	22°♂56'12	
asc. node	-4816 Mar 25 j 00:34	14°♂54'44			-4811 Jan 06 j 13:50	0°♂	
evening set	-4816 Apr 04 j 06:11	21°♂30'15			-4811 Feb 14 j 19:15	0°♂	
	-4816 Apr 17 j 11:59	0°♂			-4811 Mar 27 j 06:15	0°♂	
					-4811 May 09 j 15:38	0°♂	
conjunction	-4816 May 22 j 09:59	22°♂17'49	0°31'42		-4811 Jun 29 j 14:52	0°♂	
minimum elong	-4816 May 22 j 08:55	22°♂16'07	0°31'47	retrograde	-4811 Aug 27 j 06:44	17°♂30'38	
max. Earth dist.	-4816 May 22 j 05:40	22°♂10'55	2.67002 AU	min. Earth dist.	-4811 Oct 01 j 08:01	9°♂27'18	0.61132 AU
	-4816 Jun 03 j 11:52	0°♂		opposition	-4811 Oct 06 j 00:33	7°♂35'14	-1°-36'-42
morning rise	-4816 Jul 07 j 05:21	21°♂34'41		greatest brilliancy	-4811 Oct 05 j 15:44	7°♂44'02	-1.6m
	-4816 Jul 20 j 07:29	0°♂			-4811 Oct 30 j 01:58	30°♂	
	-4816 Sep 04 j 11:29	0°♂		direct	-4811 Nov 12 j 18:44	28°♂45'50	
	-4816 Oct 19 j 21:56	0°♂		asc. node	-4811 Nov 14 j 23:08	28°♂47'38	
	-4816 Dec 03 j 22:16	0°♂			-4811 Nov 27 j 04:34	0°♂	
	-4815 Jan 18 j 07:08	0°♂			-4810 Feb 11 j 14:22	0°♂	
	-4815 Mar 07 j 12:03	0°♂			-4810 Apr 05 j 22:23	0°♂	
desc. node	-4815 Mar 25 j 10:02	9°♂48'03			-4810 May 24 j 12:37	0°♂	
retrograde	-4815 May 20 j 09:42	26°♂47'35			-4810 Jul 08 j 22:31	0°♂	
min. Earth dist.	-4815 Jun 16 j 11:13	22°♂20'37	0.38936 AU	evening set	-4810 Aug 02 j 14:28	17°♂06'12	
greatest brilliancy	-4815 Jun 20 j 03:27	21°♂18'26	-2.8m	max. Earth dist.	-4810 Aug 17 j 20:39	27°♂58'17	2.46550 AU
opposition	-4815 Jun 21 j 10:35	20°♂56'23	-5°-40'-17		-4810 Aug 20 j 16:14	0°♂	
direct	-4815 Jul 21 j 11:12	15°♂44'51					
	-4815 Sep 11 j 13:39	0°♂		conjunction	-4810 Sep 24 j 20:53	25°♂56'12	0°34'59
	-4815 Nov 05 j 05:27	0°♂		minimum elong	-4810 Sep 24 j 22:51	25°♂59'52	0°35'07
	-4815 Dec 23 j 22:25	0°♂			-4810 Sep 30 j 06:22	0°♂	
asc. node	-4814 Feb 09 j 22:35	0°♂05'39			-4810 Nov 08 j 08:58	0°♂	
	-4814 Feb 09 j 18:59	0°♂		desc. node	-4810 Nov 15 j 05:40	5°♂20'16	
	-4814 Mar 29 j 15:24	0°♂		morning rise	-4810 Nov 23 j 04:24	11°♂32'06	
evening set	-4814 May 13 j 09:41	28°♂12'38			-4810 Dec 16 j 19:04	0°♂	
	-4814 May 16 j 05:22	0°♂		greatest brilliancy	-4809 Jan 08 j 15:56	17°♂50'30	1.2m
max. Earth dist.	-4814 Jun 15 j 09:57	19°♂18'23	2.65064 AU		-4809 Jan 24 j 09:06	0°♂	
					-4809 Mar 05 j 00:21	0°♂	
conjunction	-4814 Jun 29 j 03:29	28°♂11'43	1°03'32		-4809 Apr 15 j 15:45	0°♂	
minimum elong	-4814 Jun 29 j 02:24	28°♂09'58	1°03'44		-4809 May 30 j 12:53	0°♂	
	-4814 Jul 01 j 22:03	0°♂			-4809 Jul 20 j 19:23	0°♂	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 10

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

retrograde	-4809 Oct 01 j 20:07	23° Υ 33'27			-4803 Jan 02 j 08:22	0° Ξ	
asc. node	-4809 Oct 03 j 01:20	23° Υ 32'53		evening set	-4803 Jan 31 j 03:03	20° Ξ 44'24	
opposition	-4809 Nov 10 j 20:56	13° Υ 45'22	1°26'42		-4803 Feb 13 j 06:40	0° \approx	
min. Earth dist.	-4809 Nov 09 j 21:26	14° Υ 08'58	0.66636 AU				
greatest brilliancy	-4809 Nov 10 j 18:17	13° Υ 48'01	-1.3m	conjunction	-4803 Mar 27 j 02:33	28° \approx 36'47	0°-32'-44
direct	-4809 Dec 20 j 23:38	4° Υ 06'00		minimum elong	-4803 Mar 27 j 04:01	28° \approx 39'14	0°32'52
	-4808 Mar 10 j 10:07	0° B			-4803 Mar 29 j 04:16	0° H	
	-4808 May 02 j 13:51	0° II		max. Earth dist.	-4803 Apr 18 j 14:38	13° H 32'29	2.60666 AU
	-4808 Jun 18 j 08:22	0° Ξ			-4803 May 13 j 21:20	0° Υ	
	-4808 Jul 31 j 09:42	0° Ω		morning rise	-4803 May 17 j 02:11	2° Υ 03'53	
	-4808 Sep 09 j 21:11	0° M		asc. node	-4803 May 24 j 21:15	7° Υ 04'26	
evening set	-4808 Sep 24 j 21:07	11° M 28'28			-4803 Jun 30 j 00:04	0° B	
desc. node	-4808 Oct 02 j 02:42	17° M 03'38			-4803 Aug 17 j 07:06	0° II	
	-4808 Oct 18 j 17:24	0° $\underline{\text{A}}$			-4803 Oct 06 j 10:21	0° Ξ	
	-4808 Nov 25 j 21:01	0° M			-4803 Dec 01 j 08:31	0° Ω	
				retrograde	-4802 Feb 04 j 17:15	18° Ω 53'52	
conjunction	-4808 Nov 26 j 18:44	0° M 42'44	0°-38'-27	opposition	-4802 Mar 10 j 07:36	12° Ω 22'18	4°14'24
minimum elong	-4808 Nov 26 j 15:40	0° M 36'42	0°38'33	greatest brilliancy	-4802 Mar 12 j 04:36	11° Ω 44'54	-2.2m
max. Earth dist.	-4808 Dec 19 j 13:39	18° M 35'14	2.37942 AU	min. Earth dist.	-4802 Mar 18 j 16:59	9° Ω 36'01	0.46666 AU
	-4807 Jan 03 j 06:06	0° J		direct	-4802 Apr 16 j 06:06	4° Ω 24'23	
morning rise	-4807 Feb 02 j 13:12	23° J 08'04		desc. node	-4802 May 25 j 00:02	13° Ω 25'39	
	-4807 Feb 11 j 17:11	0° Ξ			-4802 Jun 26 j 01:09	0° M	
	-4807 Mar 25 j 00:05	0° \approx			-4802 Aug 10 j 15:00	0° $\underline{\text{A}}$	
	-4807 May 07 j 17:17	0° H			-4802 Sep 21 j 02:25	0° M	
	-4807 Jun 23 j 14:27	0° Υ			-4802 Oct 31 j 22:16	0° J	
	-4807 Aug 14 j 21:51	0° B			-4802 Dec 12 j 12:14	0° Ξ	
asc. node	-4807 Aug 20 j 02:18	2° B 40'41			-4801 Jan 24 j 13:36	0° \approx	
retrograde	-4807 Nov 05 j 00:40	27° B 16'44			-4801 Mar 10 j 07:02	0° H	
opposition	-4807 Dec 14 j 05:10	18° B 03'55	3°48'44	evening set	-4801 Mar 19 j 23:02	6° H 21'05	
greatest brilliancy	-4807 Dec 14 j 14:54	17° B 54'18	-1.3m	asc. node	-4801 Apr 11 j 17:51	21° H 10'44	
min. Earth dist.	-4807 Dec 17 j 00:44	16° B 57'14	0.65910 AU		-4801 Apr 25 j 10:07	0° Υ	
direct	-4806 Jan 24 j 09:40	8° B 03'28					
	-4806 Apr 05 j 07:30	0° II		conjunction	-4801 May 08 j 09:22	8° Υ 19'32	0°14'58
	-4806 May 27 j 05:36	0° Ξ		minimum elong	-4801 May 08 j 08:47	8° Υ 18'37	0°14'59
	-4806 Jul 10 j 18:39	0° Ω		behind sun begin	-4801 May 08 j 02:35	8° Υ 08'41	
desc. node	-4806 Aug 20 j 01:09	29° Ω 28'34		behind sun end	-4801 May 08 j 14:59	8° Υ 28'32	
	-4806 Aug 20 j 17:49	0° M		max. Earth dist.	-4801 May 14 j 00:59	11° Υ 56'34	2.66268 AU
	-4806 Sep 28 j 17:46	0° $\underline{\text{A}}$			-4801 Jun 11 j 07:56	0° B	
	-4806 Nov 05 j 23:19	0° M		morning rise	-4801 Jun 24 j 00:59	8° B 05'58	
evening set	-4806 Dec 01 j 12:10	19° M 58'12			-4801 Jul 28 j 08:46	0° II	
	-4806 Dec 14 j 11:09	0° J			-4801 Sep 13 j 03:52	0° Ξ	
	-4805 Jan 23 j 02:08	0° Ξ			-4801 Oct 29 j 20:33	0° Ω	
					-4801 Dec 16 j 06:22	0° M	
conjunction	-4805 Feb 02 j 22:33	8° Ξ 00'04	-1°-7'-18		-4800 Feb 05 j 00:12	0° $\underline{\text{A}}$	
minimum elong	-4805 Feb 02 j 23:33	8° Ξ 01'53	1°07'34	desc. node	-4800 Apr 11 j 02:39	25° $\underline{\text{A}}$ 23'17	
	-4805 Mar 05 j 12:06	0° \approx		retrograde	-4800 Apr 20 j 04:06	25° $\underline{\text{A}}$ 54'59	
max. Earth dist.	-4805 Mar 17 j 05:36	8° \approx 13'50	2.50022 AU	opposition	-4800 May 20 j 18:17	20° $\underline{\text{A}}$ 50'10	-2°-58'-21
morning rise	-4805 Apr 03 j 08:59	20° \approx 03'07		greatest brilliancy	-4800 May 20 j 16:59	20° $\underline{\text{A}}$ 51'02	-2.9m
	-4805 Apr 18 j 01:38	0° H		min. Earth dist.	-4800 May 20 j 21:56	20° $\underline{\text{A}}$ 47'44	0.37737 AU
	-4805 Jun 02 j 21:24	0° Υ		direct	-4800 Jun 20 j 01:54	15° $\underline{\text{A}}$ 45'33	
asc. node	-4805 Jul 08 j 00:02	21° Υ 59'44			-4800 Aug 09 j 23:52	0° M	
	-4805 Jul 21 j 03:40	0° B			-4800 Oct 01 j 12:46	0° J	
	-4805 Sep 11 j 07:28	0° II			-4800 Nov 17 j 03:10	0° Ξ	
	-4805 Nov 19 j 20:22	0° Ξ			-4799 Jan 02 j 02:30	0° \approx	
retrograde	-4805 Dec 14 j 22:25	3° Ξ 27'31			-4799 Feb 17 j 15:19	0° H	
	-4804 Jan 07 j 07:18	30° R II		asc. node	-4799 Feb 26 j 14:12	5° H 43'09	
opposition	-4804 Jan 21 j 03:09	25° II 15'10	5°13'07		-4799 Apr 05 j 19:17	0° Υ	
greatest brilliancy	-4804 Jan 22 j 15:06	24° II 41'14	-1.6m	evening set	-4799 Apr 28 j 11:01	14° Υ 21'28	
min. Earth dist.	-4804 Jan 27 j 16:13	22° II 47'15	0.58859 AU		-4799 May 23 j 01:54	0° B	
direct	-4804 Mar 01 j 17:17	15° II 32'23		max. Earth dist.	-4799 Jun 05 j 21:50	8° B 49'44	2.66457 AU
	-4804 Apr 23 j 18:15	0° Ξ					
	-4804 Jun 15 j 01:29	0° Ω		conjunction	-4799 Jun 14 j 11:06	14° B 18'41	0°53'33
desc. node	-4804 Jul 06 j 23:47	14° Ω 49'25		minimum elong	-4799 Jun 14 j 09:48	14° B 16'36	0°53'42
	-4804 Jul 28 j 05:49	0° M			-4799 Jul 08 j 18:18	0° II	
	-4804 Sep 06 j 05:31	0° $\underline{\text{A}}$		morning rise	-4799 Jul 29 j 20:36	13° II 47'12	
	-4804 Oct 15 j 02:30	0° M			-4799 Aug 23 j 07:36	0° Ξ	
	-4804 Nov 23 j 03:57	0° J			-4799 Oct 06 j 13:12	0° Ω	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 11

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4799 Nov 18 j 14:16	0°♎		greatest brilliancy	-4794 Oct 28 j 09:15	0°♑24'31	-1.4m
	-4799 Dec 30 j 19:08	0°♏			-4794 Oct 29 j 09:40	30°♐♐	
	-4798 Feb 10 j 21:03	0°♍		direct	-4794 Dec 06 j 18:21	20°♐59'41	
desc. node	-4798 Feb 27 j 03:37	11°♍25'11			-4793 Jan 18 j 11:07	0°♑	
	-4798 Mar 26 j 13:23	0°♐			-4793 Mar 22 j 02:47	0°♐	
	-4798 May 18 j 01:05	0°♑			-4793 May 11 j 19:25	0°♒	
retrograde	-4798 Jun 27 j 17:05	10°♑10'49			-4793 Jun 26 j 21:35	0°♑	
min. Earth dist.	-4798 Jul 25 j 12:50	4°♑58'26	0.45220 AU		-4793 Aug 08 j 18:45	0°♒	
greatest brilliancy	-4798 Jul 31 j 10:53	2°♑57'51	-2.3m	evening set	-4793 Sep 02 j 21:39	18°♒26'17	
opposition	-4798 Aug 02 j 14:24	2°♑13'45	-6°-7'-38		-4793 Sep 18 j 06:41	0°♑	
	-4798 Aug 09 j 10:12	30°♐♐		max. Earth dist.	-4793 Oct 01 j 05:24	9°♑52'40	2.39368 AU
direct	-4798 Sep 03 j 20:59	25°♐45'46		desc. node	-4793 Oct 19 j 21:35	24°♑18'33	
	-4798 Sep 30 j 19:47	0°♑			-4793 Oct 27 j 04:49	0°♏	
	-4798 Dec 05 j 17:01	0°♐					
asc. node	-4797 Jan 14 j 12:57	22°♐49'30		conjunction	-4793 Oct 31 j 20:55	3°♏39'04	0°-8'-42
	-4797 Jan 26 j 15:20	0°♐		minimum elong	-4793 Oct 31 j 20:12	3°♏37'39	0°08'43
	-4797 Mar 17 j 05:14	0°♑		behind sun begin	-4793 Oct 30 j 21:19	2°♏52'56	
	-4797 May 04 j 13:35	0°♐		behind sun end	-4793 Nov 01 j 19:04	4°♏22'24	
evening set	-4797 Jun 05 j 21:54	20°♐34'06			-4793 Dec 04 j 10:08	0°♍	
	-4797 Jun 20 j 11:33	0°♒		morning rise	-4792 Jan 06 j 05:45	25°♍39'54	
max. Earth dist.	-4797 Jul 01 j 02:40	6°♒57'16	2.61316 AU		-4792 Jan 11 j 20:05	0°♐	
					-4792 Feb 20 j 07:15	0°♑	
conjunction	-4797 Jul 23 j 01:30	21°♒32'03	1°11'15		-4792 Apr 01 j 14:50	0°♐	
minimum elong	-4797 Jul 23 j 01:18	21°♒31'44	1°11'29		-4792 May 15 j 13:37	0°♐	
	-4797 Aug 04 j 14:26	0°♑			-4792 Jul 02 j 09:15	0°♑	
morning rise	-4797 Sep 08 j 11:17	24°♑06'45			-4792 Aug 28 j 03:09	0°♐	
	-4797 Sep 16 j 19:14	0°♒		asc. node	-4792 Sep 05 j 16:13	3°♐36'11	
	-4797 Oct 28 j 06:47	0°♑		retrograde	-4792 Oct 22 j 02:58	14°♐20'31	
	-4797 Dec 07 j 11:19	0°♏		opposition	-4792 Nov 30 j 18:21	4°♐51'15	2°59'08
desc. node	-4796 Jan 15 j 02:40	29°♏19'41		greatest brilliancy	-4792 Nov 30 j 21:00	4°♐48'37	-1.3m
	-4796 Jan 15 j 23:53	0°♍		min. Earth dist.	-4792 Dec 02 j 02:14	4°♐19'29	0.66949 AU
	-4796 Feb 24 j 17:19	0°♐			-4792 Dec 13 j 11:57	30°♐♐	
	-4796 Apr 05 j 22:51	0°♑		direct	-4791 Jan 10 j 16:39	24°♑55'26	
	-4796 May 21 j 07:58	0°♐			-4791 Feb 10 j 12:04	0°♐	
	-4796 Jul 26 j 20:21	0°♐			-4791 Apr 17 j 01:48	0°♒	
retrograde	-4796 Aug 12 j 05:40	1°♐46'07			-4791 Jun 05 j 01:48	0°♑	
	-4796 Aug 27 j 22:39	30°♐♐			-4791 Jul 18 j 20:00	0°♒	
min. Earth dist.	-4796 Sep 14 j 09:07	24°♐24'15	0.57414 AU		-4791 Aug 28 j 12:45	0°♑	
opposition	-4796 Sep 20 j 10:49	22°♐01'46	-2°-57'-16	desc. node	-4791 Sep 05 j 18:11	6°♑15'34	
greatest brilliancy	-4796 Sep 19 j 14:32	22°♐21'39	-1.7m		-4791 Oct 06 j 10:11	0°♏	
direct	-4796 Oct 26 j 22:26	13°♐41'48		evening set	-4791 Nov 04 j 09:48	22°♏46'32	
asc. node	-4796 Dec 01 j 13:29	20°♐25'09			-4791 Nov 13 j 14:00	0°♍	
	-4796 Dec 25 j 16:48	0°♐			-4791 Dec 21 j 23:50	0°♐	
	-4795 Feb 21 j 19:57	0°♑					
	-4795 Apr 13 j 22:08	0°♐		conjunction	-4790 Jan 08 j 16:25	13°♐34'16	-1°-6'-28
	-4795 May 31 j 19:26	0°♒		minimum elong	-4790 Jan 08 j 14:59	13°♐31'33	1°06'42
evening set	-4795 Jul 15 j 19:48	29°♒51'06			-4790 Jan 30 j 12:12	0°♑	
	-4795 Jul 16 j 01:01	0°♑		max. Earth dist.	-4790 Feb 26 j 00:39	19°♑25'58	2.44879 AU
max. Earth dist.	-4795 Jul 31 j 18:07	10°♑49'47	2.51403 AU		-4790 Mar 12 j 19:28	0°♐	
	-4795 Aug 27 j 20:08	0°♒		morning rise	-4790 Mar 13 j 07:31	0°♐21'19	
					-4790 Apr 25 j 08:14	0°♐	
conjunction	-4795 Sep 04 j 09:47	5°♒28'09	0°54'22		-4790 Jun 10 j 09:16	0°♑	
minimum elong	-4795 Sep 04 j 11:40	5°♒31'34	0°54'34	asc. node	-4790 Jul 24 j 16:23	27°♑07'11	
	-4795 Oct 07 j 14:26	0°♑			-4790 Jul 29 j 14:12	0°♐	
morning rise	-4795 Oct 29 j 00:23	16°♑14'15			-4790 Sep 23 j 13:22	0°♒	
	-4795 Nov 15 j 22:04	0°♏		retrograde	-4790 Nov 28 j 11:17	18°♒56'33	
desc. node	-4795 Dec 02 j 01:12	12°♏30'03		opposition	-4789 Jan 05 j 14:29	10°♒16'45	4°49'49
	-4795 Dec 24 j 12:48	0°♍		greatest brilliancy	-4789 Jan 06 j 15:27	9°♒52'39	-1.4m
	-4794 Feb 01 j 06:49	0°♐		min. Earth dist.	-4789 Jan 10 j 17:32	8°♒18'02	0.62355 AU
	-4794 Mar 13 j 02:27	0°♑		direct	-4789 Feb 15 j 16:22	0°♒20'20	
	-4794 Apr 24 j 02:35	0°♐			-4789 May 09 j 22:00	0°♑	
	-4794 Jun 09 j 03:00	0°♐			-4789 Jun 26 j 08:02	0°♒	
	-4794 Aug 05 j 05:21	0°♑		desc. node	-4789 Jul 24 j 16:56	20°♒01'51	
retrograde	-4794 Sep 18 j 09:03	10°♑18'28			-4789 Aug 07 j 06:25	0°♑	
asc. node	-4794 Oct 19 j 14:45	3°♑52'13			-4789 Sep 15 j 17:01	0°♏	
min. Earth dist.	-4794 Oct 26 j 00:03	1°♑22'02	0.65207 AU		-4789 Oct 24 j 05:27	0°♍	
opposition	-4794 Oct 28 j 10:32	0°♑23'14	0°20'26		-4789 Dec 01 j 23:35	0°♐	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 12

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

evening set	-4788 Jan 09 j 23:57	29° ♁ 21'05			-4784 Nov 27 j 16:59	0° ♁		
	-4788 Jan 10 j 21:03	0° ♁			-4783 Jan 10 j 13:52	0° ♁		
	-4788 Feb 21 j 12:56	0° ♁			-4783 Feb 24 j 10:21	0° ♁		
				desc. node	-4783 Mar 15 j 21:17	12° ♁ 17'01		
conjunction	-4788 Mar 08 j 03:25	10° ♁ 52'26	0°-49'-50		-4783 Apr 16 j 14:14	0° ♁		
minimum elong	-4788 Mar 08 j 05:27	10° ♁ 55'56	0°50'01	retrograde	-4783 Jun 04 j 12:24	13° ♁ 51'23		
	-4788 Apr 05 j 05:54	0° ♁		min. Earth dist.	-4783 Jul 01 j 04:59	9° ♁ 18'11	0.40728 AU	
max. Earth dist.	-4788 Apr 07 j 01:52	1° ♁ 13'41	2.57060 AU	greatest brilliancy	-4783 Jul 06 j 02:11	7° ♁ 49'37	-2.6m	
morning rise	-4788 Apr 30 j 21:09	16° ♁ 59'14		opposition	-4783 Jul 07 j 22:52	7° ♁ 15'29	-6°-18'-34	
	-4788 May 20 j 21:57	0° ♁		direct	-4783 Aug 07 j 16:04	1° ♁ 40'32		
asc. node	-4788 Jun 10 j 13:45	13° ♁ 12'23			-4783 Oct 26 j 22:12	0° ♁		
	-4788 Jul 07 j 07:21	0° ♁			-4783 Dec 17 j 10:36	0° ♁		
	-4788 Aug 25 j 13:44	0° ♁		asc. node	-4782 Jan 31 j 04:02	27° ♁ 23'52		
	-4788 Oct 17 j 16:28	0° ♁			-4782 Feb 04 j 09:08	0° ♁		
retrograde	-4787 Jan 12 j 21:19	29° ♁ 36'21			-4782 Mar 24 j 17:50	0° ♁		
opposition	-4787 Feb 17 j 01:59	22° ♁ 19'31	5°06'31		-4782 May 11 j 13:30	0° ♁		
greatest brilliancy	-4787 Feb 19 j 02:23	21° ♁ 36'30	-1.9m	evening set	-4782 May 21 j 22:37	6° ♁ 35'10		
min. Earth dist.	-4787 Feb 25 j 07:06	19° ♁ 25'06	0.51821 AU	max. Earth dist.	-4782 Jun 21 j 02:05	25° ♁ 56'26	2.63957 AU	
direct	-4787 Mar 27 j 23:32	13° ♁ 24'57			-4782 Jun 27 j 08:01	0° ♁		
	-4787 May 22 j 15:06	0° ♁						
desc. node	-4787 Jun 10 j 16:58	10° ♁ 36'17		conjunction	-4782 Jul 07 j 16:40	6° ♁ 46'30	1°07'36	
	-4787 Jul 10 j 22:57	0° ♁		minimum elong	-4782 Jul 07 j 15:50	6° ♁ 45'08	1°07'50	
	-4787 Aug 21 j 22:56	0° ♁			-4782 Aug 11 j 13:46	0° ♁		
	-4787 Sep 30 j 22:03	0° ♁		morning rise	-4782 Aug 22 j 19:52	7° ♁ 38'38		
	-4787 Nov 09 j 18:41	0° ♁			-4782 Sep 24 j 02:37	0° ♁		
	-4787 Dec 20 j 15:10	0° ♁			-4782 Nov 05 j 01:57	0° ♁		
	-4786 Feb 01 j 02:48	0° ♁			-4782 Dec 15 j 20:45	0° ♁		
evening set	-4786 Mar 02 j 14:45	20° ♁ 06'04			-4781 Jan 25 j 01:07	0° ♁		
	-4786 Mar 17 j 10:23	0° ♁		desc. node	-4781 Jan 31 j 21:36	5° ♁ 06'51		
					-4781 Mar 06 j 14:19	0° ♁		
conjunction	-4786 Apr 22 j 18:23	23° ♁ 49'07	0°-3'-15		-4781 Apr 18 j 07:43	0° ♁		
minimum elong	-4786 Apr 22 j 18:32	23° ♁ 49'23	0°03'19		-4781 Jun 07 j 23:21	0° ♁		
behind sun begin	-4786 Apr 21 j 22:25	23° ♁ 16'47		retrograde	-4781 Jul 27 j 19:22	14° ♁ 05'56		
behind sun end	-4786 Apr 23 j 14:39	24° ♁ 21'58		min. Earth dist.	-4781 Aug 27 j 19:47	7° ♁ 32'42	0.52919 AU	
asc. node	-4786 Apr 28 j 10:06	27° ♁ 28'41		greatest brilliancy	-4781 Sep 02 j 16:43	5° ♁ 19'39	-1.9m	
	-4786 May 02 j 07:52	0° ♁		opposition	-4781 Sep 04 j 03:13	4° ♁ 46'56	-4°-19'-50	
max. Earth dist.	-4786 May 04 j 16:42	1° ♁ 31'35	2.64724 AU		-4781 Sep 18 j 05:48	30° ♁		
morning rise	-4786 Jun 09 j 16:35	24° ♁ 33'46		direct	-4781 Oct 09 j 03:07	27° ♁ 04'16		
	-4786 Jun 18 j 05:44	0° ♁			-4781 Oct 31 j 11:50	0° ♁		
	-4786 Aug 04 j 14:49	0° ♁		asc. node	-4781 Dec 19 j 03:31	18° ♁ 58'40		
	-4786 Sep 21 j 07:20	0° ♁			-4780 Jan 09 j 15:38	0° ♁		
	-4786 Nov 08 j 23:07	0° ♁			-4780 Mar 02 j 18:49	0° ♁		
	-4786 Dec 31 j 05:29	0° ♁			-4780 Apr 21 j 11:36	0° ♁		
retrograde	-4785 Mar 20 j 11:49	26° ♁ 44'16			-4780 Jun 07 j 21:26	0° ♁		
opposition	-4785 Apr 20 j 11:48	21° ♁ 26'03	0°36'05	evening set	-4780 Jun 29 j 08:20	14° ♁ 04'05		
greatest brilliancy	-4785 Apr 20 j 17:06	21° ♁ 22'19	-2.8m	max. Earth dist.	-4780 Jul 18 j 03:00	26° ♁ 39'48	2.55778 AU	
min. Earth dist.	-4785 Apr 25 j 17:47	19° ♁ 57'29	0.39676 AU		-4780 Jul 23 j 00:49	0° ♁		
desc. node	-4785 Apr 28 j 17:54	19° ♁ 08'23						
direct	-4785 May 23 j 01:47	15° ♁ 29'03		conjunction	-4780 Aug 17 j 02:00	17° ♁ 19'48	1°06'05	
	-4785 Jul 12 j 15:10	0° ♁		minimum elong	-4780 Aug 17 j 03:09	17° ♁ 21'49	1°06'19	
	-4785 Sep 01 j 03:09	0° ♁			-4780 Sep 03 j 22:51	0° ♁		
	-4785 Oct 15 j 11:39	0° ♁		morning rise	-4780 Oct 07 j 01:00	24° ♁ 07'12		
	-4785 Nov 28 j 03:27	0° ♁			-4780 Oct 14 j 22:46	0° ♁		
	-4784 Jan 11 j 13:27	0° ♁			-4780 Nov 23 j 13:16	0° ♁		
	-4784 Feb 26 j 04:30	0° ♁		desc. node	-4780 Dec 18 j 18:51	19° ♁ 26'13		
asc. node	-4784 Mar 15 j 06:46	11° ♁ 41'48			-4779 Jan 01 j 10:45	0° ♁		
	-4784 Apr 12 j 20:09	0° ♁			-4779 Feb 09 j 11:15	0° ♁		
evening set	-4784 Apr 13 j 05:01	0° ♁			-4779 Mar 21 j 14:56	0° ♁		
max. Earth dist.	-4784 May 27 j 14:36	28° ♁ 32'00	2.67047 AU		-4779 May 03 j 07:25	0° ♁		
	-4784 May 29 j 21:47	0° ♁			-4779 Jun 20 j 14:07	0° ♁		
				retrograde	-4779 Sep 04 j 12:34	26° ♁ 21'08		
conjunction	-4784 May 30 j 20:06	0° ♁ 35'36	0°40'27	min. Earth dist.	-4779 Oct 10 j 12:58	17° ♁ 57'18	0.62816 AU	
minimum elong	-4784 May 30 j 18:52	0° ♁ 33'39	0°40'33	opposition	-4779 Oct 14 j 10:06	16° ♁ 24'01	0°-52'-8	
morning rise	-4784 Jul 15 j 08:48	29° ♁ 48'19		greatest brilliancy	-4779 Oct 14 j 06:04	16° ♁ 28'03	-1.5m	
	-4784 Jul 15 j 16:02	0° ♁		asc. node	-4779 Nov 05 j 05:30	9° ♁ 09'16		
	-4784 Aug 30 j 14:15	0° ♁		direct	-4779 Nov 21 j 18:29	7° ♁ 21'03		
	-4784 Oct 14 j 13:03	0° ♁			-4778 Feb 03 j 19:02	0° ♁		

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 13

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4778 Mar 31 j 07:39	0°♄		minimum elong	-4773 Feb 16 j 02:15	20°♄57'25	1°03'12
	-4778 May 19 j 13:36	0°♂			-4773 Feb 28 j 19:14	0°♂	
	-4778 Jul 04 j 05:18	0°♂		max. Earth dist.	-4773 Mar 25 j 20:15	17°♂25'38	2.52696 AU
evening set	-4778 Aug 13 j 08:50	28°♂05'04			-4773 Apr 13 j 08:47	0°♂	
	-4778 Aug 16 j 00:39	0°♂		morning rise	-4773 Apr 14 j 05:28	0°♂34'43	
max. Earth dist.	-4778 Aug 30 j 05:11	10°♂19'52	2.43834 AU		-4773 May 29 j 01:37	0°♂	
	-4778 Sep 25 j 14:12	0°♂		asc. node	-4773 Jun 28 j 06:14	19°♂05'50	
					-4773 Jul 15 j 21:56	0°♄	
conjunction	-4778 Oct 07 j 11:18	9°♂01'54	0°20'41		-4773 Sep 04 j 16:59	0°♂	
minimum elong	-4778 Oct 07 j 12:43	9°♂04'36	0°20'46		-4773 Nov 03 j 03:24	0°♂	
	-4778 Nov 03 j 15:13	0°♂		retrograde	-4773 Dec 25 j 02:31	12°♂42'08	
desc. node	-4778 Nov 05 j 15:55	1°♂34'48		opposition	-4772 Jan 30 j 15:54	4°♂47'32	5°18'03
morning rise	-4778 Dec 08 j 13:59	27°♂20'47		greatest brilliancy	-4772 Feb 01 j 09:35	4°♂08'51	-1.7m
	-4778 Dec 11 j 23:12	0°♂		min. Earth dist.	-4772 Feb 06 j 22:02	2°♂06'19	0.56553 AU
	-4777 Jan 19 j 11:05	0°♂			-4772 Feb 12 j 22:55	30°♂	
	-4777 Feb 27 j 23:56	0°♄		direct	-4772 Mar 10 j 19:15	25°♂17'05	
	-4777 Apr 10 j 10:46	0°♂			-4772 Apr 07 j 22:29	0°♂	
	-4777 May 24 j 20:29	0°♂			-4772 Jun 07 j 15:43	0°♂	
	-4777 Jul 13 j 08:28	0°♂		desc. node	-4772 Jun 27 j 09:56	12°♂48'00	
asc. node	-4777 Sep 23 j 07:49	29°♂52'48			-4772 Jul 22 j 03:26	0°♂	
	-4777 Sep 23 j 23:31	0°♄			-4772 Aug 31 j 15:29	0°♂	
retrograde	-4777 Oct 09 j 14:13	1°♂27'46			-4772 Oct 09 j 19:19	0°♂	
	-4777 Oct 24 j 10:40	30°♂			-4772 Nov 18 j 01:46	0°♄	
opposition	-4777 Nov 18 j 12:27	21°♂45'31	2°02'33		-4772 Dec 28 j 10:28	0°♄	
greatest brilliancy	-4777 Nov 18 j 10:46	21°♂47'12	-1.3m		-4771 Feb 08 j 12:12	0°♂	
min. Earth dist.	-4777 Nov 18 j 08:54	21°♂49'05	0.67011 AU	evening set	-4771 Feb 11 j 18:05	2°♂15'28	
direct	-4777 Dec 28 j 22:57	11°♂59'08			-4771 Mar 24 j 12:22	0°♂	
	-4776 Mar 02 j 01:00	0°♄					
	-4776 Apr 26 j 19:16	0°♂		conjunction	-4771 Apr 06 j 04:23	8°♂24'50	0°-22'-1
	-4776 Jun 13 j 06:02	0°♂		minimum elong	-4771 Apr 06 j 05:22	8°♂26'27	0°22'08
	-4776 Jul 26 j 13:19	0°♂		max. Earth dist.	-4771 Apr 24 j 17:37	20°♂35'00	2.62353 AU
	-4776 Sep 05 j 02:58	0°♂			-4771 May 09 j 05:57	0°♂	
desc. node	-4776 Sep 22 j 12:54	13°♂19'27		asc. node	-4771 May 15 j 02:51	3°♂47'03	
evening set	-4776 Oct 08 j 22:18	26°♂02'39		morning rise	-4771 May 25 j 21:30	10°♂42'06	
	-4776 Oct 13 j 23:49	0°♂			-4771 Jun 25 j 05:56	0°♄	
	-4776 Nov 21 j 03:15	0°♂			-4771 Aug 12 j 03:12	0°♂	
					-4771 Sep 30 j 03:54	0°♂	
conjunction	-4776 Dec 12 j 09:22	16°♂41'12	0°-52'-8		-4771 Nov 21 j 08:18	0°♂	
minimum elong	-4776 Dec 12 j 06:04	16°♂34'46	0°52'18		-4770 Feb 02 j 13:39	0°♂	
	-4776 Dec 29 j 11:57	0°♄		retrograde	-4770 Feb 19 j 04:03	1°♂37'06	
max. Earth dist.	-4775 Jan 25 j 02:02	20°♄20'53	2.39876 AU		-4770 Mar 07 j 07:38	30°♂	
	-4775 Feb 06 j 22:35	0°♄		opposition	-4770 Mar 23 j 21:19	25°♂32'33	3°17'25
morning rise	-4775 Feb 17 j 08:57	7°♄44'01		greatest brilliancy	-4770 Mar 25 j 08:35	25°♂04'41	-2.4m
	-4775 Mar 20 j 04:15	0°♂		min. Earth dist.	-4770 Mar 31 j 19:21	23°♂03'47	0.43904 AU
	-4775 May 02 j 18:13	0°♂		direct	-4770 Apr 28 j 09:09	18°♂15'04	
	-4775 Jun 18 j 05:03	0°♂		desc. node	-4770 May 15 j 11:54	20°♂11'32	
	-4775 Aug 07 j 23:45	0°♄			-4770 Jun 12 j 02:42	0°♂	
asc. node	-4775 Aug 10 j 07:53	1°♄17'13			-4770 Aug 02 j 07:57	0°♂	
	-4775 Oct 12 j 19:52	0°♂			-4770 Sep 14 j 09:15	0°♂	
retrograde	-4775 Nov 13 j 07:43	5°♂17'27			-4770 Oct 26 j 00:24	0°♄	
	-4775 Dec 12 j 04:49	30°♂			-4770 Dec 07 j 03:02	0°♄	
opposition	-4775 Dec 22 j 04:15	26°♄15'22	4°13'52		-4769 Jan 19 j 12:59	0°♂	
greatest brilliancy	-4775 Dec 22 j 19:01	26°♄00'53	-1.3m		-4769 Mar 05 j 12:24	0°♂	
min. Earth dist.	-4775 Dec 25 j 19:58	24°♄49'21	0.64901 AU	evening set	-4769 Mar 29 j 10:04	15°♄34'50	
direct	-4774 Feb 01 j 09:23	16°♄14'26		asc. node	-4769 Apr 01 j 22:17	17°♄51'05	
	-4774 Mar 26 j 16:09	0°♂			-4769 Apr 20 j 18:52	0°♂	
	-4774 May 21 j 00:48	0°♂					
	-4774 Jul 05 j 08:59	0°♂		conjunction	-4769 May 17 j 01:55	16°♂49'34	0°24'55
desc. node	-4774 Aug 10 j 10:01	26°♂05'47		minimum elong	-4769 May 17 j 01:02	16°♂48'09	0°24'58
	-4774 Aug 15 j 15:15	0°♂		max. Earth dist.	-4769 May 19 j 11:39	18°♂21'42	2.66784 AU
	-4774 Sep 23 j 18:41	0°♂			-4769 Jun 06 j 17:31	0°♄	
	-4774 Nov 01 j 02:16	0°♂		morning rise	-4769 Jul 02 j 04:40	16°♄15'27	
	-4774 Dec 09 j 15:45	0°♄			-4769 Jul 23 j 15:25	0°♂	
evening set	-4774 Dec 16 j 09:13	5°♄09'42			-4769 Sep 08 j 01:49	0°♂	
	-4773 Jan 18 j 08:17	0°♄			-4769 Oct 24 j 00:39	0°♂	
					-4769 Dec 08 j 22:30	0°♂	
conjunction	-4773 Feb 16 j 00:29	20°♄54'15	-1°-2'-57		-4768 Jan 25 j 00:31	0°♂	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 14

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4768 Mar 18 j 11:28	0°♄			-4763 Jul 11 j 08:42	0°♄	
desc. node	-4768 Apr 01 j 13:30	6°♄04'13		evening set	-4763 Jul 25 j 18:59	9°♄55'22	
retrograde	-4768 May 07 j 15:48	13°♄43'42		max. Earth dist.	-4763 Aug 10 j 00:31	20°♄36'19	2.48755 AU
min. Earth dist.	-4768 Jun 04 j 21:39	9°♄07'44	0.38023 AU		-4763 Aug 23 j 04:17	0°♄	
opposition	-4768 Jun 07 j 19:08	8°♄20'41	-4°-43'-41				
greatest brilliancy	-4768 Jun 07 j 02:14	8°♄32'08	-2.8m	conjunction	-4763 Sep 15 j 18:00	17°♄12'37	0°44'13
direct	-4768 Jul 07 j 14:58	3°♄19'31		minimum elong	-4763 Sep 15 j 20:03	17°♄16'24	0°44'22
	-4768 Sep 21 j 03:54	0°♄			-4763 Oct 02 j 21:08	0°♄	
	-4768 Nov 10 j 01:19	0°♄		morning rise	-4763 Nov 11 j 20:28	0°♄34'37	
	-4768 Dec 27 j 07:52	0°♄			-4763 Nov 11 j 02:36	0°♄	
	-4767 Feb 12 j 12:25	0°♄		desc. node	-4763 Nov 22 j 09:53	8°♄46'36	
asc. node	-4767 Feb 16 j 19:30	2°♄43'11			-4763 Dec 19 j 14:51	0°♄	
	-4767 Apr 01 j 00:37	0°♄			-4762 Jan 27 j 06:08	0°♄	
evening set	-4767 May 07 j 01:46	22°♄46'03			-4762 Mar 07 j 22:18	0°♄	
	-4767 May 18 j 11:14	0°♄			-4762 Apr 18 j 15:20	0°♄	
max. Earth dist.	-4767 Jun 11 j 10:30	15°♄18'33	2.65797 AU		-4762 Jun 02 j 19:58	0°♄	
					-4762 Jul 25 j 16:02	0°♄	
conjunction	-4767 Jun 22 j 21:01	22°♄40'33	0°59'45	retrograde	-4762 Sep 26 j 04:00	18°♄24'58	
minimum elong	-4767 Jun 22 j 19:48	22°♄38'36	0°59'57	asc. node	-4762 Oct 09 j 21:41	17°♄08'36	
	-4767 Jul 04 j 04:18	0°♄		min. Earth dist.	-4762 Nov 03 j 14:21	9°♄12'17	0.66111 AU
morning rise	-4767 Aug 07 j 09:00	22°♄29'13		opposition	-4762 Nov 05 j 05:13	8°♄33'11	0°59'46
	-4767 Aug 18 j 14:47	0°♄		greatest brilliancy	-4762 Nov 05 j 02:34	8°♄35'51	-1.3m
	-4767 Oct 01 j 14:02	0°♄			-4762 Dec 02 j 14:25	30°♄	
	-4767 Nov 13 j 04:37	0°♄		direct	-4762 Dec 14 j 23:30	29°♄00'17	
	-4767 Dec 24 j 19:01	0°♄			-4762 Dec 27 j 23:42	0°♄	
	-4766 Feb 03 j 23:49	0°♄			-4761 Mar 15 j 09:50	0°♄	
desc. node	-4766 Feb 17 j 14:10	9°♄49'47			-4761 May 06 j 11:19	0°♄	
	-4766 Mar 18 j 01:35	0°♄			-4761 Jun 21 j 23:51	0°♄	
	-4766 May 03 j 11:12	0°♄			-4761 Aug 04 j 00:41	0°♄	
retrograde	-4766 Jul 09 j 08:46	23°♄42'01			-4761 Sep 13 j 13:12	0°♄	
min. Earth dist.	-4766 Aug 07 j 05:33	18°♄01'37	0.47988 AU	evening set	-4761 Sep 15 j 14:29	1°♄33'32	
greatest brilliancy	-4766 Aug 13 j 07:59	15°♄51'25	-2.2m	desc. node	-4761 Oct 10 j 06:40	20°♄31'14	
opposition	-4766 Aug 15 j 07:33	15°♄08'52	-5°-35'-34		-4761 Oct 22 j 10:47	0°♄	
direct	-4766 Sep 17 j 14:39	8°♄12'04		max. Earth dist.	-4761 Nov 05 j 08:06	10°♄53'10	2.37786 AU
	-4766 Nov 26 j 11:27	0°♄					
asc. node	-4765 Jan 04 j 18:54	21°♄02'38		conjunction	-4761 Nov 15 j 20:33	19°♄09'31	0°-26'-5
	-4765 Jan 20 j 10:55	0°♄		minimum elong	-4761 Nov 15 j 18:19	19°♄05'09	0°26'08
	-4765 Mar 12 j 00:15	0°♄			-4761 Nov 29 j 15:06	0°♄	
	-4765 Apr 29 j 18:34	0°♄			-4760 Jan 06 j 23:59	0°♄	
evening set	-4765 Jun 14 j 16:06	29°♄13'46		morning rise	-4760 Jan 22 j 11:22	11°♄54'12	
	-4765 Jun 15 j 20:34	0°♄			-4760 Feb 15 j 10:12	0°♄	
max. Earth dist.	-4765 Jul 07 j 11:33	14°♄12'14	2.59549 AU		-4760 Mar 27 j 15:57	0°♄	
	-4765 Jul 30 j 23:50	0°♄			-4760 May 10 j 09:37	0°♄	
					-4760 Jun 26 j 12:54	0°♄	
conjunction	-4765 Aug 01 j 05:28	0°♄50'24	1°11'02		-4760 Aug 19 j 03:21	0°♄	
minimum elong	-4765 Aug 01 j 05:43	0°♄50'51	1°11'18	asc. node	-4760 Aug 26 j 23:01	3°♄48'01	
	-4765 Sep 12 j 02:39	0°♄		retrograde	-4760 Oct 30 j 01:21	22°♄11'01	
morning rise	-4765 Sep 18 j 15:12	4°♄39'31		opposition	-4760 Dec 08 j 11:05	12°♄50'30	3°28'42
	-4765 Oct 23 j 10:06	0°♄		greatest brilliancy	-4760 Dec 08 j 17:25	12°♄44'12	-1.3m
	-4765 Dec 02 j 09:25	0°♄		min. Earth dist.	-4760 Dec 10 j 14:57	11°♄59'01	0.66504 AU
desc. node	-4764 Jan 05 j 13:15	26°♄05'17		direct	-4759 Jan 18 j 13:08	2°♄51'21	
	-4764 Jan 10 j 15:48	0°♄			-4759 Apr 09 j 21:54	0°♄	
	-4764 Feb 19 j 01:27	0°♄			-4759 May 30 j 11:53	0°♄	
	-4764 Mar 30 j 18:13	0°♄			-4759 Jul 13 j 17:53	0°♄	
	-4764 May 13 j 17:14	0°♄			-4759 Aug 23 j 15:01	0°♄	
	-4764 Jul 06 j 16:17	0°♄		desc. node	-4759 Aug 27 j 04:56	2°♄42'33	
retrograde	-4764 Aug 21 j 00:52	11°♄24'03			-4759 Oct 01 j 14:17	0°♄	
min. Earth dist.	-4764 Sep 24 j 06:03	3°♄38'05	0.59564 AU	greatest brilliancy	-4759 Nov 07 j 01:32	28°♄38'42	1.2m
opposition	-4764 Sep 29 j 13:14	1°♄32'10	-2°-10'-12		-4759 Nov 08 j 18:53	0°♄	
greatest brilliancy	-4764 Sep 28 j 23:55	1°♄45'22	-1.6m	evening set	-4759 Nov 19 j 17:41	8°♄36'06	
	-4764 Oct 03 j 11:26	30°♄			-4759 Dec 17 j 05:02	0°♄	
direct	-4764 Nov 05 j 17:58	22°♄55'01					
asc. node	-4764 Nov 21 j 19:48	24°♄26'56		conjunction	-4758 Jan 23 j 07:30	28°♄11'28	-1°-8'-24
	-4764 Dec 12 j 14:55	0°♄		minimum elong	-4758 Jan 23 j 07:33	28°♄11'35	1°08'39
	-4763 Feb 15 j 08:14	0°♄			-4758 Jan 25 j 17:47	0°♄	
	-4763 Apr 08 j 15:49	0°♄			-4758 Mar 08 j 01:08	0°♄	
	-4763 May 26 j 23:34	0°♄		max. Earth dist.	-4758 Mar 09 j 17:03	1°♄10'39	2.47754 AU

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 15

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

morning rise	-4758 Mar 25 j 15:23	12° \approx 19'43		greatest brilliancy	-4753 May 07 j 21:25	7° $\underline{\Delta}$ 59'49	-2.9m
	-4758 Apr 20 j 12:48	0° H		min. Earth dist.	-4753 May 10 j 08:47	7° $\underline{\Delta}$ 19'37	0.38238 AU
	-4758 Jun 05 j 09:05	0° Υ		direct	-4753 Jun 07 j 22:04	2° $\underline{\Delta}$ 40'32	
asc. node	-4758 Jul 14 j 21:13	24° Υ 33'35			-4753 Aug 21 j 10:18	0° M	
	-4758 Jul 23 j 22:29	0° B			-4753 Oct 08 j 00:04	0° Z	
	-4758 Sep 15 j 07:03	0° II			-4753 Nov 22 j 00:22	0° Z	
retrograde	-4758 Dec 07 j 16:54	27° II 32'59			-4752 Jan 06 j 04:18	0° \approx	
opposition	-4757 Jan 14 j 08:07	19° II 07'44	5°04'41		-4752 Feb 21 j 05:53	0° H	
greatest brilliancy	-4757 Jan 15 j 15:14	18° II 38'01	-1.5m	asc. node	-4752 Mar 05 j 11:43	8° H 30'52	
min. Earth dist.	-4757 Jan 20 j 06:16	16° II 52'09	0.60542 AU		-4752 Apr 08 j 03:30	0° Υ	
direct	-4757 Feb 24 j 04:22	9° II 17'23		evening set	-4752 Apr 22 j 00:13	8° Υ 48'44	
	-4757 May 01 j 07:33	0° S			-4752 May 25 j 07:45	0° B	
	-4757 Jun 20 j 02:39	0° Ω		max. Earth dist.	-4752 Jun 01 j 23:35	4° B 53'17	2.66822 AU
desc. node	-4757 Jul 15 j 03:31	17° Ω 16'27					
	-4757 Aug 01 j 17:26	0° M		conjunction	-4752 Jun 08 j 05:53	8° B 53'26	0°48'24
	-4757 Sep 10 j 11:28	0° $\underline{\Delta}$		minimum elong	-4752 Jun 08 j 04:35	8° B 51'21	0°48'31
	-4757 Oct 19 j 04:18	0° M			-4752 Jul 11 j 01:06	0° II	
	-4757 Nov 27 j 01:34	0° Z		morning rise	-4752 Jul 23 j 15:21	8° II 11'13	
	-4756 Jan 06 j 01:42	0° Z			-4752 Aug 25 j 18:38	0° S	
evening set	-4756 Jan 22 j 20:05	12° Z 13'01			-4752 Oct 09 j 08:00	0° Ω	
	-4756 Feb 16 j 19:39	0° \approx			-4752 Nov 21 j 20:17	0° M	
					-4751 Jan 03 j 16:51	0° $\underline{\Delta}$	
conjunction	-4756 Mar 19 j 04:27	21° \approx 38'38	0°-40'-16		-4751 Feb 15 j 17:35	0° M	
minimum elong	-4756 Mar 19 j 06:13	21° \approx 41'38	0°40'25	desc. node	-4751 Mar 06 j 07:24	12° M 35'34	
	-4756 Mar 31 j 13:47	0° H			-4751 Apr 02 j 09:32	0° Z	
max. Earth dist.	-4756 Apr 13 j 21:36	8° H 52'47	2.59143 AU	retrograde	-4751 Jun 18 j 02:06	29° Z 37'30	
morning rise	-4756 May 10 j 07:44	26° H 11'19		min. Earth dist.	-4751 Jul 15 j 05:33	24° Z 45'53	0.43076 AU
	-4756 May 16 j 05:06	0° Υ		greatest brilliancy	-4751 Jul 20 j 20:08	22° Z 56'58	-2.5m
asc. node	-4756 May 31 j 18:26	9° Υ 59'15		opposition	-4751 Jul 22 j 23:21	22° Z 15'08	-6°-22'-2
	-4756 Jul 02 j 09:42	0° B		direct	-4751 Aug 23 j 11:23	16° Z 11'28	
	-4756 Aug 20 j 01:03	0° II			-4751 Oct 14 j 13:45	0° Z	
	-4756 Oct 10 j 04:50	0° S			-4751 Dec 10 j 08:46	0° \approx	
	-4756 Dec 09 j 18:25	0° Ω		asc. node	-4750 Jan 21 j 09:59	24° \approx 56'29	
retrograde	-4755 Jan 25 j 08:45	10° Ω 36'38			-4750 Jan 29 j 18:38	0° H	
opposition	-4755 Feb 28 j 16:51	3° Ω 43'50	4°42'36		-4750 Mar 19 j 18:28	0° Υ	
greatest brilliancy	-4755 Mar 02 j 16:56	3° Ω 02'28	-2.1m		-4750 May 06 j 21:17	0° B	
min. Earth dist.	-4755 Mar 09 j 03:17	0° Ω 50'45	0.48992 AU	evening set	-4750 May 30 j 11:50	14° B 59'20	
	-4755 Mar 11 j 17:43	30° R S			-4750 Jun 22 j 18:16	0° II	
direct	-4755 Apr 07 j 14:02	25° S 17'43		max. Earth dist.	-4750 Jun 26 j 21:15	2° II 41'18	2.62592 AU
	-4755 May 04 j 23:54	0° Ω					
desc. node	-4755 Jun 01 j 03:22	11° Ω 35'29		conjunction	-4750 Jul 16 j 09:48	15° II 32'39	1°10'16
	-4755 Jul 02 j 16:02	0° M		minimum elong	-4750 Jul 16 j 09:18	15° II 31'49	1°10'31
	-4755 Aug 15 j 07:08	0° $\underline{\Delta}$			-4750 Aug 06 j 23:09	0° S	
	-4755 Sep 24 j 23:57	0° M		morning rise	-4750 Sep 01 j 03:51	17° S 16'22	
	-4755 Nov 04 j 07:32	0° Z			-4750 Sep 19 j 08:17	0° Ω	
	-4755 Dec 15 j 12:07	0° Z			-4750 Oct 31 j 01:27	0° M	
	-4754 Jan 27 j 05:48	0° \approx			-4750 Dec 10 j 12:20	0° $\underline{\Delta}$	
evening set	-4754 Mar 12 j 16:32	29° \approx 58'19			-4749 Jan 19 j 07:24	0° M	
	-4754 Mar 12 j 17:32	0° H		desc. node	-4749 Jan 22 j 06:15	2° M 13'46	
asc. node	-4754 Apr 18 j 15:29	24° H 08'39			-4749 Feb 28 j 07:47	0° Z	
	-4754 Apr 27 j 17:04	0° Υ			-4749 Apr 11 j 00:45	0° Z	
					-4749 May 27 j 19:38	0° \approx	
conjunction	-4754 May 01 j 19:54	2° Υ 39'05	0°07'30	retrograde	-4749 Aug 06 j 10:15	24° \approx 51'39	
minimum elong	-4754 May 01 j 19:36	2° Υ 38'37	0°07'29	min. Earth dist.	-4749 Sep 07 j 15:14	17° \approx 50'15	0.55489 AU
behind sun begin	-4754 May 01 j 01:39	2° Υ 09'45		greatest brilliancy	-4749 Sep 13 j 04:08	15° \approx 41'56	-1.8m
behind sun end	-4754 May 02 j 13:33	3° Υ 07'29		opposition	-4749 Sep 14 j 06:20	15° \approx 16'33	-3°-32'-34
max. Earth dist.	-4754 May 10 j 07:21	8° Υ 05'48	2.65676 AU	direct	-4749 Oct 20 j 02:37	7° \approx 12'08	
	-4754 Jun 13 j 14:23	0° B		asc. node	-4749 Dec 09 j 10:31	19° \approx 32'34	
morning rise	-4754 Jun 17 j 23:35	2° B 47'26			-4748 Jan 01 j 09:26	0° H	
	-4754 Jul 30 j 18:24	0° II			-4748 Feb 26 j 00:15	0° Υ	
	-4754 Sep 15 j 22:08	0° S			-4748 Apr 16 j 11:39	0° B	
	-4754 Nov 02 j 08:55	0° Ω			-4748 Jun 03 j 04:46	0° II	
	-4754 Dec 21 j 09:33	0° M		evening set	-4748 Jul 08 j 14:41	23° II 20'40	
	-4753 Feb 15 j 14:03	0° $\underline{\Delta}$			-4748 Jul 18 j 10:30	0° S	
retrograde	-4753 Apr 07 j 04:56	13° $\underline{\Delta}$ 06'43		max. Earth dist.	-4748 Jul 25 j 16:16	4° S 57'17	2.53437 AU
desc. node	-4753 Apr 19 j 05:46	12° $\underline{\Delta}$ 11'59					
opposition	-4753 May 07 j 17:38	8° $\underline{\Delta}$ 02'23	-1°-23'-47	conjunction	-4748 Aug 27 j 06:38	27° S 48'31	1°00'15

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 16

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

minimum elong	-4748 Aug 27 j 08:15	27° \mathfrak{C} 51'24	1°00'28		-4743 Jun 12 j 23:48	0° Υ	
	-4748 Aug 30 j 08:05	0° \mathcal{Q}		asc. node	-4743 Jul 31 j 13:36	29° Υ 21'29	
	-4748 Oct 10 j 05:38	0° \mathfrak{M}			-4743 Aug 01 j 16:26	0° \mathcal{B}	
morning rise	-4748 Oct 19 j 02:36	6° \mathfrak{M} 40'12			-4743 Sep 29 j 04:59	0° \mathbb{I}	
	-4748 Nov 18 j 16:38	0° $\underline{\mathcal{A}}$		retrograde	-4743 Nov 21 j 20:55	13° \mathbb{I} 28'24	
desc. node	-4748 Dec 09 j 05:09	15° $\underline{\mathcal{A}}$ 51'51		opposition	-4743 Dec 30 j 08:19	4° \mathbb{I} 38'08	4°35'42
	-4748 Dec 27 j 10:14	0° \mathfrak{M}		greatest brilliancy	-4743 Dec 31 j 04:40	4° \mathbb{I} 18'20	-1.4m
	-4747 Feb 04 j 06:17	0° \mathcal{X}		min. Earth dist.	-4742 Jan 03 j 19:40	2° \mathbb{I} 53'39	0.63622 AU
	-4747 Mar 16 j 03:58	0° \mathcal{C}			-4742 Jan 11 j 14:36	30° $\mathcal{R}\mathcal{B}$	
	-4747 Apr 27 j 08:22	0° \approx		direct	-4742 Feb 09 j 12:17	24° \mathcal{B} 38'34	
	-4747 Jun 13 j 00:15	0° \mathcal{H}			-4742 Mar 12 j 15:07	0° \mathbb{I}	
	-4747 Aug 14 j 12:51	0° Υ			-4742 May 14 j 06:55	0° \mathfrak{C}	
retrograde	-4747 Sep 12 j 13:54	4° Υ 54'05			-4742 Jun 29 j 18:23	0° \mathcal{Q}	
	-4747 Oct 09 j 10:46	30° $\mathcal{R}\mathcal{H}$		desc. node	-4742 Jul 31 j 20:39	22° \mathcal{Q} 54'47	
min. Earth dist.	-4747 Oct 19 j 11:56	26° \mathcal{H} 11'21	0.64261 AU		-4742 Aug 10 j 10:11	0° \mathfrak{M}	
opposition	-4747 Oct 22 j 13:42	24° \mathcal{H} 57'12	0°-9'-12		-4742 Sep 18 j 17:50	0° $\underline{\mathcal{A}}$	
greatest brilliancy	-4747 Oct 22 j 13:06	24° \mathcal{H} 57'48	-1.4m		-4742 Oct 27 j 03:56	0° \mathfrak{M}	
asc. node	-4747 Oct 26 j 11:54	23° \mathcal{H} 23'18			-4742 Dec 04 j 19:12	0° \mathcal{X}	
direct	-4747 Nov 30 j 11:01	15° \mathcal{H} 42'10		evening set	-4742 Dec 30 j 14:24	19° \mathcal{X} 35'57	
	-4746 Jan 25 j 09:46	0° Υ			-4741 Jan 13 j 13:19	0° \mathcal{C}	
	-4746 Mar 25 j 09:47	0° \mathcal{B}			-4741 Feb 24 j 01:43	0° \approx	
	-4746 May 14 j 11:48	0° \mathbb{I}					
	-4746 Jun 29 j 10:37	0° \mathfrak{C}		conjunction	-4741 Feb 28 j 07:32	2° \approx 59'09	0°-56'-4
	-4746 Aug 11 j 08:22	0° \mathcal{Q}		minimum elong	-4741 Feb 28 j 09:36	3° \approx 02'47	0°56'17
evening set	-4746 Aug 24 j 17:02	9° \mathcal{Q} 43'06		max. Earth dist.	-4741 Apr 02 j 16:19	25° \approx 58'19	2.55190 AU
max. Earth dist.	-4746 Sep 14 j 21:56	25° \mathcal{Q} 28'18	2.41247 AU		-4741 Apr 08 j 15:41	0° \mathcal{H}	
	-4746 Sep 20 j 21:59	0° \mathfrak{M}		morning rise	-4741 Apr 24 j 12:21	10° \mathcal{H} 34'32	
					-4741 May 24 j 06:44	0° Υ	
conjunction	-4746 Oct 20 j 21:02	22° \mathfrak{M} 58'21	0°04'32	asc. node	-4741 Jun 18 j 11:29	16° Υ 03'19	
minimum elong	-4746 Oct 20 j 21:24	22° \mathfrak{M} 59'04	0°04'35		-4741 Jul 10 j 19:17	0° \mathcal{B}	
behind sun begin	-4746 Oct 19 j 20:26	22° \mathfrak{M} 10'40			-4741 Aug 29 j 14:06	0° \mathbb{I}	
behind sun end	-4746 Oct 21 j 22:23	23° \mathfrak{M} 47'30			-4741 Oct 23 j 14:40	0° \mathfrak{C}	
desc. node	-4746 Oct 27 j 02:17	27° \mathfrak{M} 48'16		retrograde	-4740 Jan 05 j 00:49	22° \mathfrak{C} 31'05	
	-4746 Oct 29 j 21:57	0° $\underline{\mathcal{A}}$		opposition	-4740 Feb 09 j 20:30	14° \mathfrak{C} 56'18	5°14'43
	-4746 Dec 07 j 04:32	0° \mathfrak{M}		greatest brilliancy	-4740 Feb 11 j 18:32	14° \mathfrak{C} 14'26	-1.8m
morning rise	-4746 Dec 24 j 14:04	13° \mathfrak{M} 38'25		min. Earth dist.	-4740 Feb 17 j 16:11	12° \mathfrak{C} 06'13	0.54025 AU
	-4745 Jan 14 j 14:43	0° \mathcal{X}		direct	-4740 Mar 20 j 08:45	5° \mathfrak{C} 43'11	
	-4745 Feb 23 j 01:28	0° \mathcal{C}			-4740 May 29 j 19:21	0° \mathcal{Q}	
	-4745 Apr 05 j 08:47	0° \approx		desc. node	-4740 Jun 17 j 20:48	11° \mathcal{Q} 30'22	
	-4745 May 19 j 09:33	0° \mathcal{H}			-4740 Jul 15 j 12:54	0° \mathfrak{M}	
	-4745 Jul 06 j 16:45	0° Υ			-4740 Aug 25 j 19:05	0° $\underline{\mathcal{A}}$	
	-4745 Sep 04 j 16:06	0° \mathcal{B}			-4740 Oct 04 j 08:39	0° \mathfrak{M}	
asc. node	-4745 Sep 13 j 13:08	3° \mathcal{B} 10'07			-4740 Nov 12 j 21:41	0° \mathcal{X}	
retrograde	-4745 Oct 17 j 08:51	9° \mathcal{B} 19'15			-4740 Dec 23 j 11:24	0° \mathcal{C}	
	-4745 Nov 25 j 11:16	30° $\mathcal{R}\Upsilon$			-4739 Feb 03 j 17:11	0° \approx	
opposition	-4745 Nov 26 j 03:31	29° Υ 43'45	2°36'16	evening set	-4739 Feb 22 j 16:51	13° \approx 03'55	
greatest brilliancy	-4745 Nov 26 j 03:53	29° Υ 43'23	-1.3m		-4739 Mar 19 j 20:01	0° \mathcal{H}	
min. Earth dist.	-4745 Nov 26 j 19:39	29° Υ 27'37	0.67106 AU				
direct	-4744 Jan 05 j 20:42	19° Υ 51'29		conjunction	-4739 Apr 15 j 19:18	17° \mathcal{H} 47'07	0°-11'-8
	-4744 Feb 20 j 09:47	0° \mathcal{B}		minimum elong	-4739 Apr 15 j 19:47	17° \mathcal{H} 47'54	0°11'12
	-4744 Apr 20 j 15:49	0° \mathbb{I}		behind sun begin	-4739 Apr 15 j 04:54	17° \mathcal{H} 23'37	
	-4744 Jun 08 j 00:13	0° \mathfrak{C}		behind sun end	-4739 Apr 16 j 10:40	18° \mathcal{H} 12'11	
	-4744 Jul 21 j 15:00	0° \mathcal{Q}		max. Earth dist.	-4739 Apr 30 j 15:16	27° \mathcal{H} 25'36	2.63765 AU
	-4744 Aug 31 j 07:17	0° \mathfrak{M}			-4739 May 04 j 14:47	0° Υ	
desc. node	-4744 Sep 12 j 22:35	9° \mathfrak{M} 38'05		asc. node	-4739 May 05 j 07:53	0° Υ 27'37	
	-4744 Oct 09 j 04:57	0° $\underline{\mathcal{A}}$		morning rise	-4739 Jun 03 j 11:01	19° Υ 08'32	
evening set	-4744 Oct 23 j 15:35	11° $\underline{\mathcal{A}}$ 19'44			-4739 Jun 20 j 12:52	0° \mathcal{B}	
	-4744 Nov 16 j 08:39	0° \mathfrak{M}			-4739 Aug 07 j 02:26	0° \mathbb{I}	
	-4744 Dec 24 j 17:24	0° \mathcal{X}			-4739 Sep 24 j 07:13	0° \mathfrak{C}	
					-4739 Nov 13 j 04:24	0° \mathcal{Q}	
conjunction	-4744 Dec 27 j 22:25	2° \mathcal{X} 28'51	-1°-1'-56		-4738 Jan 08 j 14:44	0° \mathfrak{M}	
minimum elong	-4744 Dec 27 j 19:55	2° \mathcal{X} 24'01	1°02'10	retrograde	-4738 Mar 07 j 04:39	15° \mathfrak{M} 41'05	
	-4743 Feb 02 j 04:00	0° \mathcal{C}		opposition	-4738 Apr 07 j 22:04	10° \mathfrak{M} 03'58	1°55'24
max. Earth dist.	-4743 Feb 14 j 19:55	9° \mathcal{C} 22'28	2.42552 AU	greatest brilliancy	-4738 Apr 08 j 17:35	9° \mathfrak{M} 49'31	-2.6m
morning rise	-4743 Mar 03 j 07:13	21° \mathcal{C} 21'43		min. Earth dist.	-4738 Apr 14 j 16:59	8° \mathfrak{M} 04'00	0.41369 AU
	-4743 Mar 15 j 09:14	0° \approx		desc. node	-4738 May 05 j 21:24	3° \mathfrak{M} 46'03	
	-4743 Apr 27 j 20:43	0° \mathcal{H}		direct	-4738 May 11 j 19:54	3° \mathfrak{M} 31'37	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4738 Jul 22 j 19:26	0°♄		conjunction	-4733 Aug 10 j 16:27	10°♄28'54	1°08'57
	-4738 Sep 06 j 19:24	0°♍		minimum elong	-4733 Aug 10 j 17:13	10°♄30'13	1°09'11
	-4738 Oct 19 j 16:51	0°♎			-4733 Sep 07 j 10:58	0°♏	
	-4738 Dec 01 j 12:58	0°♐		morning rise	-4733 Sep 29 j 08:47	15°♏48'53	
	-4737 Jan 14 j 10:22	0°♑			-4733 Oct 18 j 15:02	0°♐	
	-4737 Feb 28 j 16:56	0°♒			-4733 Nov 27 j 09:47	0°♑	
asc. node	-4737 Mar 23 j 04:25	14°♒35'35		desc. node	-4733 Dec 26 j 22:53	22°♑40'27	
evening set	-4737 Apr 07 j 13:00	24°♒28'43			-4732 Jan 05 j 11:13	0°♒	
	-4737 Apr 16 j 03:39	0°♓			-4732 Feb 13 j 15:02	0°♓	
					-4732 Mar 24 j 22:32	0°♐	
conjunction	-4737 May 25 j 13:50	25°♓10'09	0°34'11		-4732 May 06 j 23:56	0°♑	
minimum elong	-4737 May 25 j 12:43	25°♓08'22	0°34'16		-4732 Jun 25 j 18:43	0°♒	
max. Earth dist.	-4737 May 24 j 20:20	24°♓42'15	2.67034 AU	retrograde	-4732 Aug 29 j 11:44	20°♒32'40	
	-4737 Jun 02 j 03:40	0°♓		min. Earth dist.	-4732 Oct 03 j 17:02	12°♒24'53	0.61460 AU
morning rise	-4737 Jul 10 j 07:23	24°♓25'01		opposition	-4732 Oct 08 j 05:18	10°♒36'48	-1°-24'-19
	-4737 Jul 18 j 23:32	0°♐		greatest brilliancy	-4732 Oct 07 j 21:48	10°♒44'17	-1.5m
	-4737 Sep 03 j 03:19	0°♑		asc. node	-4732 Nov 12 j 02:06	1°♒48'05	
	-4737 Oct 18 j 12:13	0°♒		direct	-4732 Nov 15 j 01:07	1°♒44'41	
	-4737 Dec 02 j 08:33	0°♓			-4731 Feb 08 j 04:43	0°♓	
	-4736 Jan 16 j 08:30	0°♑			-4731 Apr 03 j 05:21	0°♓	
	-4736 Mar 03 j 12:05	0°♒			-4731 May 22 j 02:23	0°♐	
desc. node	-4736 Mar 23 j 00:16	11°♒10'26			-4731 Jul 06 j 16:33	0°♑	
	-4736 May 09 j 06:03	0°♓		evening set	-4731 Aug 05 j 03:20	20°♑25'34	
retrograde	-4736 May 24 j 00:14	1°♓27'14			-4731 Aug 18 j 13:12	0°♒	
	-4736 Jun 07 j 15:09	30°♒♍		max. Earth dist.	-4731 Aug 20 j 15:57	1°♒31'28	2.46045 AU
min. Earth dist.	-4736 Jun 19 j 22:38	26°♒59'54	0.39205 AU				
greatest brilliancy	-4736 Jun 23 j 20:33	25°♒52'47	-2.7m	conjunction	-4731 Sep 27 j 17:16	29°♒37'37	0°31'42
opposition	-4736 Jun 25 j 06:46	25°♒28'07	-5°-53'-28	minimum elong	-4731 Sep 27 j 19:07	29°♒41'06	0°31'48
direct	-4736 Jul 25 j 11:14	20°♒12'55			-4731 Sep 28 j 05:08	0°♓	
	-4736 Sep 05 j 09:47	0°♓			-4731 Nov 06 j 08:30	0°♑	
	-4736 Nov 01 j 22:11	0°♐		desc. node	-4731 Nov 12 j 19:58	5°♑02'12	
	-4736 Dec 21 j 04:28	0°♑		morning rise	-4731 Nov 26 j 13:39	15°♑45'28	
asc. node	-4735 Feb 07 j 01:13	29°♑52'36			-4731 Dec 14 j 18:23	0°♒	
	-4735 Feb 07 j 05:58	0°♒		greatest brilliancy	-4731 Dec 21 j 16:34	5°♒25'01	1.2m
	-4735 Mar 27 j 04:47	0°♓			-4730 Jan 22 j 07:17	0°♓	
	-4735 May 13 j 20:28	0°♓			-4730 Mar 02 j 20:24	0°♐	
evening set	-4735 May 15 j 14:43	1°♓07'00			-4730 Apr 13 j 08:12	0°♑	
max. Earth dist.	-4735 Jun 17 j 00:20	21°♓50'16	2.64888 AU		-4730 May 27 j 22:35	0°♒	
	-4735 Jun 29 j 14:43	0°♐			-4730 Jul 17 j 09:29	0°♓	
				asc. node	-4730 Sep 30 j 04:14	26°♓18'28	
conjunction	-4735 Jul 01 j 07:51	1°♐06'55	1°04'46	retrograde	-4730 Oct 03 j 22:24	26°♓23'51	
minimum elong	-4735 Jul 01 j 06:50	1°♐05'15	1°04'58	opposition	-4730 Nov 12 j 21:51	16°♓36'56	1°37'08
	-4735 Aug 13 j 23:20	0°♑		min. Earth dist.	-4730 Nov 12 j 02:34	16°♓56'20	0.66726 AU
morning rise	-4735 Aug 16 j 02:14	1°♑25'45		greatest brilliancy	-4730 Nov 12 j 19:14	16°♓39'34	-1.3m
	-4735 Sep 26 j 17:24	0°♒		direct	-4730 Dec 23 j 01:00	6°♓56'06	
	-4735 Nov 07 j 23:54	0°♓			-4729 Mar 07 j 20:12	0°♓	
	-4735 Dec 19 j 03:03	0°♑			-4729 Apr 30 j 21:14	0°♐	
	-4734 Jan 28 j 17:06	0°♒			-4729 Jun 16 j 23:39	0°♑	
desc. node	-4734 Feb 08 j 01:15	7°♒37'49			-4729 Jul 30 j 05:32	0°♒	
	-4734 Mar 10 j 18:38	0°♓			-4729 Sep 08 j 19:48	0°♓	
	-4734 Apr 23 j 13:41	0°♐		evening set	-4729 Sep 29 j 00:41	15°♓27'46	
	-4734 Jun 19 j 06:22	0°♑		desc. node	-4729 Sep 30 j 17:03	16°♓45'44	
retrograde	-4734 Jul 20 j 05:00	6°♑05'32			-4729 Oct 17 j 17:28	0°♑	
min. Earth dist.	-4734 Aug 19 j 05:23	29°♐55'37	0.50736 AU		-4729 Nov 24 j 21:18	0°♒	
	-4734 Aug 19 j 00:31	30°♒♐					
greatest brilliancy	-4734 Aug 25 j 06:20	27°♐41'58	-2.0m	conjunction	-4729 Dec 01 j 06:20	5°♒01'04	0°-41'-55
opposition	-4734 Aug 26 j 22:57	27°♐04'17	-4°-54'-12	minimum elong	-4729 Dec 01 j 03:08	4°♒54'47	0°42'01
direct	-4734 Sep 30 j 05:34	19°♐40'58		max. Earth dist.	-4729 Dec 31 j 05:28	28°♒26'54	2.38188 AU
	-4734 Nov 14 j 00:27	0°♑			-4728 Jan 02 j 05:30	0°♓	
asc. node	-4734 Dec 26 j 00:20	19°♑51'02		morning rise	-4728 Feb 06 j 23:22	27°♓16'30	
	-4733 Jan 13 j 17:49	0°♒			-4728 Feb 10 j 14:45	0°♐	
	-4733 Mar 06 j 15:25	0°♓			-4728 Mar 22 j 19:01	0°♑	
	-4733 Apr 24 j 22:25	0°♓			-4728 May 05 j 08:34	0°♒	
	-4733 Jun 11 j 05:28	0°♐			-4728 Jun 20 j 23:40	0°♓	
evening set	-4733 Jun 23 j 13:27	8°♐02'47			-4728 Aug 11 j 14:48	0°♓	
max. Earth dist.	-4733 Jul 14 j 02:32	21°♐41'06	2.57554 AU	asc. node	-4728 Aug 17 j 04:34	2°♓56'49	
	-4733 Jul 26 j 09:52	0°♑			-4728 Nov 02 j 19:46	0°♐	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

retrograde	-4728 Nov 07 j 04:31	0°II06'59			-4722 Jan 22 j 06:15	0°≈	
	-4728 Nov 11 j 11:41	30°R8			-4722 Mar 07 j 23:05	0°K	
opposition	-4728 Dec 16 j 07:05	20°856'19	3°55'49	evening set	-4722 Mar 22 j 10:00	9°K29'12	
greatest brilliancy	-4728 Dec 16 j 17:55	20°845'37	-1.3m	asc. node	-4722 Apr 08 j 19:55	20°K48'40	
min. Earth dist.	-4728 Dec 19 j 06:50	19°845'29	0.65737 AU		-4722 Apr 23 j 01:43	0°Y	
direct	-4727 Jan 26 j 11:05	10°855'24					
	-4727 Apr 01 j 12:52	0°II		conjunction	-4722 May 10 j 16:03	11°Y17'31	0°17'49
	-4727 May 24 j 13:29	0°S		minimum elong	-4722 May 10 j 15:23	11°Y16'26	0°17'50
	-4727 Jul 08 j 10:57	0°Q		max. Earth dist.	-4722 May 15 j 19:07	14°Y34'16	2.66401 AU
desc. node	-4727 Aug 17 j 13:51	29°Q14'13			-4722 Jun 08 j 23:17	0°8	
	-4727 Aug 18 j 14:13	0°M		morning rise	-4722 Jun 26 j 04:03	10°857'47	
	-4727 Sep 26 j 16:14	0°A			-4722 Jul 25 j 23:42	0°II	
	-4727 Nov 03 j 22:32	0°M			-4722 Sep 10 j 17:25	0°S	
evening set	-4727 Dec 04 j 22:51	24°M13'38			-4722 Oct 27 j 06:23	0°Q	
	-4727 Dec 12 j 10:00	0°J			-4722 Dec 13 j 07:17	0°M	
	-4726 Jan 20 j 23:45	0°S			-4721 Jan 31 j 22:33	0°A	
				desc. node	-4721 Apr 09 j 16:48	29°A02'32	
conjunction	-4726 Feb 06 j 01:29	11°S50'11	-1°-6'-27		-4721 Apr 15 j 23:30	0°M	
minimum elong	-4726 Feb 06 j 02:43	11°S52'25	1°06'41	retrograde	-4721 Apr 25 j 01:48	0°M31'36	
	-4726 Mar 03 j 07:47	0°≈			-4721 May 04 j 05:01	30°RA	
max. Earth dist.	-4726 Mar 19 j 08:32	11°≈14'44	2.50537 AU	opposition	-4721 May 25 j 17:08	25°A24'55	-3°-24'-45
morning rise	-4726 Apr 06 j 01:24	23°≈24'56		min. Earth dist.	-4721 May 25 j 06:10	25°A32'13	0.37724 AU
	-4726 Apr 15 j 18:53	0°K		greatest brilliancy	-4721 May 25 j 13:24	25°A27'25	-2.9m
	-4726 May 31 j 11:39	0°Y		direct	-4721 Jun 24 j 19:35	20°A22'26	
asc. node	-4726 Jul 05 j 03:19	21°Y47'46			-4721 Aug 04 j 17:25	0°M	
	-4726 Jul 18 j 13:03	0°8			-4721 Sep 29 j 05:39	0°J	
	-4726 Sep 08 j 04:09	0°II			-4721 Nov 15 j 09:49	0°S	
	-4726 Nov 11 j 23:49	0°S			-4721 Dec 31 j 13:58	0°≈	
retrograde	-4726 Dec 17 j 10:04	6°S28'52			-4720 Feb 16 j 04:38	0°K	
	-4725 Jan 18 j 22:37	30°RII		asc. node	-4720 Feb 24 j 16:43	5°K25'34	
opposition	-4725 Jan 23 j 11:14	28°II19'46	5°14'18		-4720 Apr 03 j 09:37	0°Y	
greatest brilliancy	-4725 Jan 25 j 00:24	27°II44'44	-1.6m	evening set	-4720 Apr 30 j 16:42	17°Y17'06	
min. Earth dist.	-4725 Jan 30 j 03:16	25°II49'13	0.58440 AU		-4720 May 20 j 17:16	0°8	
direct	-4725 Mar 04 j 23:04	18°II38'38		max. Earth dist.	-4720 Jun 07 j 10:47	11°818'53	2.66366 AU
	-4725 Apr 20 j 01:10	0°S					
	-4725 Jun 13 j 06:31	0°Q		conjunction	-4720 Jun 16 j 15:17	17°812'25	0°55'23
desc. node	-4725 Jul 05 j 13:05	14°Q52'48		minimum elong	-4720 Jun 16 j 14:01	17°810'22	0°55'32
	-4725 Jul 26 j 21:00	0°M			-4720 Jul 06 j 10:49	0°II	
	-4725 Sep 05 j 00:37	0°A		morning rise	-4720 Aug 01 j 00:21	16°II42'51	
	-4725 Oct 13 j 23:05	0°M			-4720 Aug 21 j 01:02	0°S	
	-4725 Nov 22 j 00:38	0°J			-4720 Oct 04 j 06:47	0°Q	
	-4724 Jan 01 j 04:17	0°S			-4720 Nov 16 j 06:54	0°M	
evening set	-4724 Feb 04 j 00:14	24°S20'37			-4720 Dec 28 j 09:20	0°A	
	-4724 Feb 12 j 01:19	0°≈			-4719 Feb 08 j 06:15	0°M	
	-4724 Mar 26 j 21:26	0°K		desc. node	-4719 Feb 24 j 17:33	11°M39'13	
					-4719 Mar 23 j 10:26	0°J	
conjunction	-4724 Mar 29 j 15:45	1°K50'53	0°-29'-53		-4719 May 12 j 11:36	0°S	
minimum elong	-4724 Mar 29 j 17:06	1°K53'08	0°30'01	retrograde	-4719 Jun 30 j 14:05	14°S09'13	
max. Earth dist.	-4724 Apr 20 j 06:02	16°K08'26	2.61026 AU	min. Earth dist.	-4719 Jul 28 j 13:08	8°S52'19	0.45740 AU
	-4724 May 11 j 12:59	0°Y		greatest brilliancy	-4719 Aug 03 j 13:32	6°S48'47	-2.3m
morning rise	-4724 May 19 j 08:41	5°Y02'34		opposition	-4719 Aug 05 j 16:33	6°S04'50	-6°-1'-34
asc. node	-4724 May 22 j 00:25	6°Y45'00			-4719 Aug 29 j 17:30	30°RJ	
	-4724 Jun 27 j 13:57	0°8		direct	-4719 Sep 07 j 04:33	29°J31'13	
	-4724 Aug 14 j 17:48	0°II			-4719 Sep 15 j 20:49	0°S	
	-4724 Oct 03 j 13:00	0°S			-4719 Dec 02 j 05:55	0°≈	
	-4724 Nov 27 j 04:24	0°Q		asc. node	-4718 Jan 11 j 15:58	22°≈49'33	
retrograde	-4723 Feb 07 j 19:45	22°Q29'06			-4718 Jan 23 j 20:35	0°K	
opposition	-4723 Mar 13 j 07:26	16°Q02'11	4°01'50		-4718 Mar 14 j 16:04	0°Y	
greatest brilliancy	-4723 Mar 15 j 02:31	15°Q26'40	-2.3m		-4718 May 02 j 03:30	0°8	
min. Earth dist.	-4723 Mar 21 j 16:08	13°Q18'12	0.46149 AU	evening set	-4718 Jun 08 j 03:37	23°831'11	
direct	-4723 Apr 18 j 22:52	8°Q11'18			-4718 Jun 18 j 03:54	0°II	
desc. node	-4723 May 22 j 15:08	15°Q09'52		max. Earth dist.	-4718 Jul 03 j 00:30	9°II43'08	2.61014 AU
	-4723 Jun 22 j 05:14	0°M					
	-4723 Aug 07 j 21:04	0°A		conjunction	-4718 Jul 25 j 08:27	24°II34'59	1°11'21
	-4723 Sep 18 j 15:54	0°M		minimum elong	-4718 Jul 25 j 08:22	24°II34'50	1°11'35
	-4723 Oct 29 j 14:27	0°J			-4718 Aug 02 j 08:57	0°S	
	-4723 Dec 10 j 05:08	0°S		morning rise	-4718 Sep 10 j 21:47	27°S21'29	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 19

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4718 Sep 14 j 15:26	0°♈		asc. node	-4713 Sep 03 j 20:00	4°♌23'16	
	-4718 Oct 26 j 04:00	0°♍		retrograde	-4713 Oct 25 j 04:58	17°♌07'38	
	-4718 Dec 05 j 08:39	0°♎		opposition	-4713 Dec 03 j 18:43	7°♌40'01	3°07'31
desc. node	-4717 Jan 12 j 17:04	29°♏08'08		greatest brilliancy	-4713 Dec 03 j 22:05	7°♌36'40	-1.3m
	-4717 Jan 13 j 20:18	0°♐		min. Earth dist.	-4713 Dec 05 j 06:33	7°♌04'18	0.66903 AU
	-4717 Feb 22 j 11:19	0°♑			-4713 Dec 25 j 23:59	30°♑	
	-4717 Apr 04 j 11:28	0°♒		direct	-4712 Jan 13 j 16:54	27°♑43'21	
	-4717 May 19 j 06:12	0°♓			-4712 Feb 02 j 17:50	0°♒	
	-4717 Jul 18 j 04:53	0°♈			-4712 Apr 14 j 00:18	0°♑	
retrograde	-4717 Aug 15 j 13:15	4°♉57'03			-4712 Jun 02 j 14:41	0°♒	
	-4717 Sep 11 j 03:10	30°♊			-4712 Jul 16 j 15:01	0°♑	
min. Earth dist.	-4717 Sep 17 j 21:24	27°♊29'46	0.57829 AU		-4712 Aug 26 j 11:01	0°♑	
opposition	-4717 Sep 23 j 18:49	25°♊10'51	-2°-44'-48	desc. node	-4712 Sep 03 j 08:56	6°♑00'26	
greatest brilliancy	-4717 Sep 23 j 00:18	25°♊29'05	-1.7m		-4712 Oct 04 j 09:54	0°♑	
direct	-4717 Oct 30 j 09:03	16°♊47'23		evening set	-4712 Nov 07 j 20:22	27°♑03'49	
asc. node	-4717 Nov 29 j 16:51	21°♊48'24			-4712 Nov 11 j 13:52	0°♑	
	-4717 Dec 22 j 02:36	0°♋			-4712 Dec 19 j 22:46	0°♑	
	-4716 Feb 19 j 20:43	0°♌					
	-4716 Apr 11 j 08:16	0°♍		conjunction	-4711 Jan 12 j 03:07	17°♌46'02	-1°-7'-15
	-4716 May 29 j 10:20	0°♎		minimum elong	-4711 Jan 12 j 02:03	17°♌44'01	1°07'31
	-4716 Jul 13 j 19:13	0°♏			-4711 Jan 28 j 09:26	0°♌	
evening set	-4716 Jul 18 j 06:27	3°♏02'59		max. Earth dist.	-4711 Feb 28 j 23:00	23°♌06'46	2.45426 AU
max. Earth dist.	-4716 Aug 03 j 03:34	14°♏01'45	2.50905 AU		-4711 Mar 10 j 14:28	0°♌	
	-4716 Aug 25 j 16:45	0°♐		morning rise	-4711 Mar 16 j 08:52	4°♌04'42	
					-4711 Apr 23 j 00:31	0°♋	
conjunction	-4716 Sep 07 j 02:22	8°♐58'06	0°52'00		-4711 Jun 07 j 21:53	0°♌	
minimum elong	-4716 Sep 07 j 04:18	9°♐01'38	0°52'11	asc. node	-4711 Jul 21 j 18:51	27°♌01'13	
	-4716 Oct 05 j 12:40	0°♑			-4711 Jul 26 j 19:39	0°♋	
morning rise	-4716 Nov 01 j 03:34	20°♑12'13			-4711 Sep 19 j 17:22	0°♌	
	-4716 Nov 13 j 21:05	0°♒		retrograde	-4711 Nov 30 j 18:49	21°♌51'32	
desc. node	-4716 Nov 29 j 14:20	12°♒10'40		opposition	-4710 Jan 07 j 19:12	13°♌14'32	4°53'40
	-4716 Dec 22 j 11:45	0°♓		greatest brilliancy	-4710 Jan 08 j 21:28	12°♌49'11	-1.5m
	-4715 Jan 30 j 04:44	0°♈		min. Earth dist.	-4710 Jan 13 j 01:45	11°♌12'30	0.62046 AU
	-4715 Mar 10 j 22:03	0°♉		direct	-4710 Feb 17 j 19:26	3°♌18'54	
	-4715 Apr 21 j 17:45	0°♊			-4710 May 06 j 15:35	0°♓	
	-4715 Jun 06 j 08:14	0°♋			-4710 Jun 23 j 20:07	0°♒	
	-4715 Jul 31 j 12:23	0°♌		desc. node	-4710 Jul 22 j 07:25	19°♒57'09	
retrograde	-4715 Sep 20 j 10:51	13°♌09'27			-4710 Aug 05 j 01:10	0°♑	
asc. node	-4715 Oct 16 j 18:34	8°♌28'59			-4710 Sep 13 j 14:46	0°♒	
min. Earth dist.	-4715 Oct 28 j 05:04	4°♌09'35	0.65395 AU		-4710 Oct 22 j 04:17	0°♓	
opposition	-4715 Oct 30 j 11:30	3°♌14'45	0°31'39		-4710 Nov 29 j 22:08	0°♈	
greatest brilliancy	-4715 Oct 30 j 09:37	3°♌16'39	-1.4m		-4709 Jan 08 j 18:18	0°♉	
	-4715 Nov 07 j 18:28	30°♊		evening set	-4709 Jan 13 j 01:33	3°♉10'11	
direct	-4715 Dec 08 j 20:29	23°♊49'20			-4709 Feb 19 j 08:17	0°♊	
	-4714 Jan 12 j 09:53	0°♋					
	-4714 Mar 19 j 02:05	0°♌		conjunction	-4709 Mar 11 j 21:22	14°♌18'31	0°-47'-23
	-4714 May 09 j 06:49	0°♍		minimum elong	-4709 Mar 11 j 23:22	14°♌21'57	0°47'35
	-4714 Jun 24 j 14:38	0°♎			-4709 Apr 03 j 23:04	0°♋	
	-4714 Aug 06 j 15:12	0°♏		max. Earth dist.	-4709 Apr 09 j 22:25	4°♋00'13	2.57456 AU
evening set	-4714 Sep 05 j 19:32	22°♏10'14		morning rise	-4709 May 04 j 07:23	20°♋06'27	
	-4714 Sep 16 j 05:11	0°♑			-4709 May 19 j 12:55	0°♌	
max. Earth dist.	-4714 Oct 06 j 22:28	15°♑50'33	2.38952 AU	asc. node	-4709 Jun 08 j 16:01	12°♌53'55	
desc. node	-4714 Oct 17 j 10:58	23°♑59'16			-4709 Jul 05 j 19:34	0°♍	
	-4714 Oct 25 j 04:14	0°♒			-4709 Aug 23 j 20:39	0°♌	
					-4709 Oct 15 j 07:10	0°♓	
conjunction	-4714 Nov 04 j 06:11	7°♒53'08	0°-12'-54		-4709 Dec 24 j 18:01	0°♒	
minimum elong	-4714 Nov 04 j 05:05	7°♒50'59	0°12'55	retrograde	-4708 Jan 16 j 17:23	2°♒55'43	
behind sun begin	-4714 Nov 03 j 12:22	7°♒18'16			-4708 Feb 07 j 06:11	30°♑	
behind sun end	-4714 Nov 04 j 21:47	8°♒23'43		opposition	-4708 Feb 20 j 18:21	25°♓43'02	5°00'53
	-4714 Dec 02 j 09:32	0°♓		greatest brilliancy	-4708 Feb 22 j 18:35	25°♓00'19	-2.0m
morning rise	-4713 Jan 09 j 23:36	0°♈09'39		min. Earth dist.	-4708 Feb 29 j 00:09	22°♓48'51	0.51299 AU
	-4713 Jan 09 j 18:36	0°♉		direct	-4708 Mar 30 j 10:21	16°♓53'15	
	-4713 Feb 18 j 04:05	0°♊			-4708 May 17 j 23:58	0°♒	
	-4713 Mar 31 j 09:04	0°♋		desc. node	-4708 Jun 08 j 07:07	11°♒16'38	
	-4713 May 14 j 03:42	0°♌			-4708 Jul 08 j 02:49	0°♑	
	-4713 Jun 30 j 14:55	0°♍			-4708 Aug 19 j 12:44	0°♒	
	-4713 Aug 24 j 23:33	0°♎			-4708 Sep 28 j 15:36	0°♓	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4708 Nov 07 j 13:33	0°♊			-4703 Aug 09 j 08:00	0°♋		
	-4708 Dec 18 j 09:57	0°♌		morning rise	-4703 Aug 25 j 03:26	10°♋44'57		
	-4707 Jan 29 j 20:46	0°♍			-4703 Sep 21 j 21:43	0°♎		
evening set	-4707 Mar 05 j 03:25	23°♍19'56			-4703 Nov 02 j 21:10	0°♏		
	-4707 Mar 15 j 03:09	0°♐			-4703 Dec 13 j 15:15	0°♑		
					-4702 Jan 22 j 17:52	0°♒		
conjunction	-4707 Apr 25 j 02:30	26°♐50'57	0°00'-15	desc. node	-4702 Jan 29 j 09:51	4°♒59'16		
minimum elong	-4707 Apr 25 j 02:28	26°♐50'54	0°00'17		-4702 Mar 04 j 03:22	0°♊		
behind sun begin	-4707 Apr 24 j 06:16	26°♐18'13			-4702 Apr 15 j 11:42	0°♌		
behind sun end	-4707 Apr 25 j 22:40	27°♐23'33			-4702 Jun 03 j 13:31	0°♍		
asc. node	-4707 Apr 25 j 13:25	27°♐08'35		retrograde	-4702 Jul 30 j 07:14	17°♍30'27		
	-4707 Apr 29 j 23:31	0°♎		min. Earth dist.	-4702 Aug 30 j 13:03	10°♍50'47	0.53428 AU	
max. Earth dist.	-4707 May 06 j 09:20	4°♎07'54	2.64920 AU	greatest brilliancy	-4702 Sep 05 j 07:54	8°♍38'55	-1.9m	
morning rise	-4707 Jun 11 j 20:36	27°♎27'36		opposition	-4702 Sep 06 j 16:20	8°♍07'57	-4°-8'-10	
	-4707 Jun 15 j 20:24	0°♏		direct	-4702 Oct 11 j 20:09	0°♍20'45		
	-4707 Aug 02 j 04:10	0°♐		asc. node	-4702 Dec 16 j 07:26	19°♍32'43		
	-4707 Sep 18 j 17:46	0°♑			-4701 Jan 06 j 06:28	0°♐		
	-4707 Nov 06 j 02:00	0°♒			-4701 Mar 01 j 01:21	0°♑		
	-4707 Dec 27 j 08:41	0°♓			-4701 Apr 20 j 00:04	0°♒		
	-4706 Mar 11 j 08:49	0°♑			-4701 Jun 06 j 13:36	0°♓		
retrograde	-4706 Mar 24 j 08:09	1°♑00'52		evening set	-4701 Jul 02 j 14:44	17°♓04'33		
	-4706 Apr 06 j 01:11	30°♒♐		max. Earth dist.	-4701 Jul 21 j 04:18	29°♓33'31	2.55363 AU	
opposition	-4706 Apr 24 j 05:03	25°♓46'07	0°09'32		-4701 Jul 21 j 19:53	0°♋		
greatest brilliancy	-4706 Apr 24 j 06:26	25°♓45'09	-2.8m					
desc. node	-4706 Apr 26 j 08:58	25°♓09'42		conjunction	-4701 Aug 20 j 12:10	20°♋32'28	1°04'47	
min. Earth dist.	-4706 Apr 29 j 00:11	24°♓25'35	0.39341 AU	minimum elong	-4701 Aug 20 j 13:26	20°♋34'41	1°05'01	
direct	-4706 May 26 j 13:34	19°♓56'18			-4701 Sep 02 j 20:04	0°♎		
	-4706 Jul 06 j 14:50	0°♑		morning rise	-4701 Oct 10 j 19:04	27°♎41'53		
	-4706 Aug 28 j 21:00	0°♒			-4701 Oct 13 j 21:16	0°♓		
	-4706 Oct 12 j 18:53	0°♊			-4701 Nov 22 j 12:04	0°♑		
	-4706 Nov 25 j 15:35	0°♌		desc. node	-4701 Dec 17 j 08:58	19°♑10'02		
	-4705 Jan 09 j 03:29	0°♍			-4701 Dec 31 j 08:53	0°♒		
	-4705 Feb 23 j 19:08	0°♐			-4700 Feb 08 j 07:39	0°♊		
asc. node	-4705 Mar 13 j 09:23	11°♐22'15			-4700 Mar 19 j 08:04	0°♌		
	-4705 Apr 11 j 11:05	0°♑			-4700 Apr 30 j 18:12	0°♍		
evening set	-4705 Apr 16 j 11:29	3°♑12'04			-4700 Jun 17 j 07:19	0°♐		
	-4705 May 28 j 13:04	0°♒		retrograde	-4700 Sep 06 j 16:40	29°♐20'01		
max. Earth dist.	-4705 May 30 j 04:56	1°♒03'33	2.67016 AU	min. Earth dist.	-4700 Oct 12 j 20:45	20°♐52'06	0.63129 AU	
				opposition	-4700 Oct 16 j 13:58	19°♐22'31	0°-39'-58	
conjunction	-4705 Jun 03 j 00:39	3°♒29'50	0°42'45	greatest brilliancy	-4700 Oct 16 j 10:59	19°♐25'31	-1.5m	
minimum elong	-4705 Jun 02 j 23:24	3°♒27'50	0°42'52	asc. node	-4700 Nov 02 j 08:46	13°♐22'53		
	-4705 Jul 14 j 07:43	0°♓		direct	-4700 Nov 24 j 00:05	10°♐17'03		
morning rise	-4705 Jul 18 j 12:18	2°♓42'43			-4699 Jan 30 j 23:02	0°♑		
	-4705 Aug 29 j 06:00	0°♋			-4699 Mar 28 j 12:47	0°♒		
	-4705 Oct 13 j 03:54	0°♎			-4699 May 17 j 02:54	0°♓		
	-4705 Nov 26 j 05:25	0°♏			-4699 Jul 01 j 23:16	0°♋		
	-4704 Jan 08 j 21:15	0°♑			-4699 Aug 13 j 21:47	0°♎		
	-4704 Feb 22 j 06:01	0°♒		evening set	-4699 Aug 15 j 23:37	1°♎29'46		
desc. node	-4704 Mar 13 j 10:51	13°♒01'13		max. Earth dist.	-4699 Sep 02 j 12:43	14°♎17'56	2.43356 AU	
	-4704 Apr 11 j 10:13	0°♊			-4699 Sep 23 j 13:28	0°♓		
retrograde	-4704 Jun 07 j 16:05	18°♊12'24						
min. Earth dist.	-4704 Jul 04 j 10:46	13°♊36'38	0.41131 AU	conjunction	-4699 Oct 10 j 10:37	12°♓50'44	0°16'58	
greatest brilliancy	-4704 Jul 09 j 11:43	12°♊03'50	-2.6m	minimum elong	-4699 Oct 10 j 11:48	12°♓53'01	0°17'02	
opposition	-4704 Jul 11 j 10:21	11°♊27'45	-6°-22'-41		-4699 Nov 01 j 15:32	0°♑		
direct	-4704 Aug 11 j 05:24	5°♊47'47		desc. node	-4699 Nov 03 j 06:28	1°♑15'47		
	-4704 Oct 23 j 00:35	0°♌			-4699 Dec 09 j 23:31	0°♒		
	-4704 Dec 14 j 13:12	0°♍		morning rise	-4699 Dec 12 j 02:16	1°♒39'30		
asc. node	-4703 Jan 28 j 07:02	27°♍14'12			-4698 Jan 17 j 10:22	0°♊		
	-4703 Feb 01 j 18:48	0°♐			-4698 Feb 25 j 21:04	0°♌		
	-4703 Mar 22 j 06:38	0°♑			-4698 Apr 08 j 04:27	0°♍		
	-4703 May 09 j 04:24	0°♒			-4698 May 22 j 08:18	0°♐		
evening set	-4703 May 24 j 03:24	9°♒29'13			-4698 Jul 10 j 06:24	0°♑		
max. Earth dist.	-4703 Jun 22 j 16:31	28°♒28'38	2.63714 AU		-4698 Sep 14 j 00:14	0°♒		
	-4703 Jun 25 j 00:45	0°♓		asc. node	-4698 Sep 20 j 09:31	1°♒39'48		
				retrograde	-4698 Oct 11 j 16:23	4°♒17'18		
conjunction	-4703 Jul 09 j 22:00	9°♓44'05	1°08'29		-4698 Nov 06 j 03:43	30°♒♑		
minimum elong	-4703 Jul 09 j 21:15	9°♓42'51	1°08'41	opposition	-4698 Nov 20 j 13:16	24°♑36'11	2°12'24	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 21

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

greatest brilliancy	-4698 Nov 20 j 11:52	24° Υ 37'35	-1.3m			-4692 Feb 07 j 06:43	0° \approx	
min. Earth dist.	-4698 Nov 20 j 13:25	24° Υ 36'02	0.67062 AU	evening set		-4692 Feb 15 j 10:47	5° \approx 40'41	
direct	-4698 Dec 31 j 00:24	14° Υ 48'29				-4692 Mar 22 j 05:16	0° H	
	-4697 Feb 26 j 21:06	0° B						
	-4697 Apr 25 j 00:37	0° II		conjunction		-4692 Apr 08 j 14:54	11° H 33'04	0°-19'-4
	-4697 Jun 11 j 20:51	0° S		minimum elong		-4692 Apr 08 j 15:46	11° H 34'29	0°19'10
	-4697 Jul 25 j 08:57	0° Ω		max. Earth dist.		-4692 Apr 26 j 08:26	23° H 09'41	2.62641 AU
	-4697 Sep 04 j 01:24	0° M				-4692 May 06 j 21:26	0° Υ	
desc. node	-4697 Sep 21 j 02:38	13° M 01'14		asc. node		-4692 May 12 j 05:16	3° Υ 26'17	
	-4697 Oct 12 j 23:38	0° A		morning rise		-4692 May 28 j 02:52	13° Υ 38'49	
evening set	-4697 Oct 13 j 05:06	0° A 10'40				-4692 Jun 22 j 19:57	0° B	
	-4697 Nov 20 j 03:21	0° M				-4692 Aug 09 j 14:48	0° II	
						-4692 Sep 27 j 09:38	0° S	
conjunction	-4697 Dec 16 j 21:38	20° M 59'59	0°-54'-47			-4692 Nov 17 j 20:19	0° Ω	
minimum elong	-4697 Dec 16 j 18:27	20° M 53'47	0°54'57			-4691 Jan 21 j 17:07	0° M	
	-4697 Dec 28 j 11:23	0° A		retrograde		-4691 Feb 22 j 17:17	5° M 32'19	
max. Earth dist.	-4696 Jan 31 j 19:16	26° A 13'02	2.40344 AU			-4691 Mar 25 j 19:23	30° R Ω	
	-4696 Feb 05 j 20:26	0° S		opposition		-4691 Mar 27 j 05:52	29° Ω 33'22	2°59'11
morning rise	-4696 Feb 21 j 15:55	11° S 42'32		greatest brilliancy		-4691 Mar 28 j 13:58	29° Ω 08'23	-2.5m
	-4696 Mar 17 j 23:43	0° \approx		min. Earth dist.		-4691 Apr 04 j 00:49	27° Ω 08'57	0.43390 AU
	-4696 Apr 30 j 10:22	0° H		direct		-4691 May 01 j 11:06	22° Ω 24'39	
	-4696 Jun 15 j 16:01	0° Υ		desc. node		-4691 May 13 j 00:45	23° Ω 18'38	
	-4696 Aug 04 j 22:55	0° B				-4691 Jun 05 j 13:09	0° M	
asc. node	-4696 Aug 07 j 10:12	1° B 22'51				-4691 Jul 30 j 02:03	0° A	
	-4696 Oct 06 j 09:26	0° II				-4691 Sep 11 j 17:35	0° M	
retrograde	-4696 Nov 15 j 12:30	8° II 09'08				-4691 Oct 23 j 14:05	0° A	
	-4696 Dec 22 j 02:46	30° R B				-4691 Dec 04 j 18:48	0° S	
opposition	-4696 Dec 24 j 06:49	29° B 09'14	4°19'55			-4690 Jan 17 j 05:11	0° \approx	
greatest brilliancy	-4696 Dec 24 j 22:45	28° B 53'36	-1.3m			-4690 Mar 03 j 04:17	0° H	
min. Earth dist.	-4696 Dec 28 j 02:07	27° B 39'40	0.64695 AU	asc. node		-4690 Mar 30 j 01:51	17° H 31'32	
direct	-4695 Feb 03 j 11:11	19° B 08'10		evening set		-4690 Mar 31 j 18:01	18° H 36'30	
	-4695 Mar 21 j 22:15	0° II				-4690 Apr 18 j 10:24	0° Υ	
	-4695 May 18 j 05:50	0° S						
	-4695 Jul 03 j 00:46	0° Ω		conjunction		-4690 May 19 j 06:31	19° Υ 43'46	0°27'33
desc. node	-4695 Aug 08 j 00:06	25° Ω 54'42		minimum elong		-4690 May 19 j 05:34	19° Υ 42'14	0°27'37
	-4695 Aug 13 j 11:44	0° M		max. Earth dist.		-4690 May 21 j 04:35	20° Υ 57'13	2.66853 AU
	-4695 Sep 21 j 17:15	0° A				-4690 Jun 04 j 08:55	0° B	
	-4695 Oct 30 j 01:22	0° M		morning rise		-4690 Jul 04 j 06:43	19° B 06'04	
	-4695 Dec 07 j 14:17	0° A				-4690 Jul 21 j 06:47	0° II	
evening set	-4695 Dec 19 j 16:49	9° A 16'43				-4690 Sep 05 j 16:30	0° S	
	-4694 Jan 16 j 05:26	0° S				-4690 Oct 21 j 12:58	0° Ω	
						-4690 Dec 06 j 05:07	0° M	
conjunction	-4694 Feb 19 j 00:05	24° S 35'51	-1°-1'-22			-4689 Jan 21 j 17:24	0° A	
minimum elong	-4694 Feb 19 j 01:59	24° S 39'13	1°01'35			-4689 Mar 13 j 22:10	0° M	
	-4694 Feb 26 j 14:30	0° \approx		desc. node		-4689 Mar 31 j 02:56	8° M 12'37	
max. Earth dist.	-4694 Mar 27 j 22:35	20° \approx 24'28	2.53184 AU	retrograde		-4689 May 12 j 12:58	18° M 30'04	
	-4694 Apr 11 j 01:50	0° H		min. Earth dist.		-4689 Jun 09 j 10:10	13° M 57'04	0.38168 AU
morning rise	-4694 Apr 16 j 19:50	3° H 51'39		opposition		-4689 Jun 12 j 19:33	13° M 01'30	-5°-3'-58
	-4694 May 26 j 16:02	0° Υ		greatest brilliancy		-4689 Jun 11 j 23:11	13° M 15'27	-2.8m
asc. node	-4694 Jun 25 j 08:54	18° Υ 51'00		direct		-4689 Jul 12 j 17:02	7° M 59'02	
	-4694 Jul 13 j 08:18	0° B				-4689 Sep 17 j 20:00	0° A	
	-4694 Sep 01 j 18:02	0° II				-4689 Nov 08 j 00:36	0° S	
	-4694 Oct 29 j 10:14	0° S				-4689 Dec 25 j 16:12	0° \approx	
retrograde	-4694 Dec 27 j 18:04	15° S 51'53				-4688 Feb 11 j 00:20	0° H	
opposition	-4693 Feb 02 j 03:26	8° S 00'45	5°17'05	asc. node		-4688 Feb 14 j 22:44	2° H 29'08	
greatest brilliancy	-4693 Feb 03 j 21:52	7° S 21'25	-1.7m			-4688 Mar 29 j 14:21	0° Υ	
min. Earth dist.	-4693 Feb 09 j 11:05	5° S 18'26	0.56104 AU	evening set		-4688 May 09 j 06:20	25° Υ 39'51	
	-4693 Feb 27 j 13:31	30° R II				-4688 May 16 j 02:21	0° B	
direct	-4693 Mar 14 j 03:10	28° II 33'04		max. Earth dist.		-4688 Jun 12 j 22:26	17° B 46'26	2.65658 AU
	-4693 Mar 29 j 05:46	0° S						
	-4693 Jun 05 j 12:40	0° Ω		conjunction		-4688 Jun 25 j 00:34	25° B 33'58	1°01'14
desc. node	-4693 Jun 26 j 00:14	13° Ω 01'50		minimum elong		-4688 Jun 24 j 23:25	25° B 32'06	1°01'25
	-4693 Jul 20 j 16:03	0° M				-4688 Jul 01 j 20:47	0° II	
	-4693 Aug 30 j 09:45	0° A		morning rise		-4688 Aug 09 j 12:54	25° II 26'33	
	-4693 Oct 08 j 15:43	0° M				-4688 Aug 16 j 08:28	0° S	
	-4693 Nov 16 j 22:31	0° A				-4688 Sep 29 j 08:24	0° Ω	
	-4693 Dec 27 j 06:25	0° S				-4688 Nov 10 j 22:48	0° M	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 22

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4688 Dec 22 j 11:50	0°♄			-4682 May 03 j 20:49	0°♄		
	-4687 Feb 01 j 13:26	0°♄			-4682 Jun 19 j 16:20	0°♄		
desc. node	-4687 Feb 15 j 04:46	9°♄54'42			-4682 Aug 01 j 21:20	0°♄		
	-4687 Mar 15 j 07:48	0°♄			-4682 Sep 11 j 12:28	0°♄		
	-4687 Apr 29 j 18:00	0°♄		evening set	-4682 Sep 18 j 14:20	5°♄22'31		
retrograde	-4687 Jul 12 j 03:28	27°♄28'30		desc. node	-4682 Oct 07 j 21:23	20°♄12'41		
min. Earth dist.	-4687 Aug 10 j 04:02	21°♄42'24	0.48499 AU		-4682 Oct 20 j 11:22	0°♄		
greatest brilliancy	-4687 Aug 16 j 06:45	19°♄31'04	-2.2m	max. Earth dist.	-4682 Nov 15 j 18:34	20°♄38'32	2.37662 AU	
opposition	-4687 Aug 18 j 04:47	18°♄49'30	-5°-26'-24					
direct	-4687 Sep 20 j 17:13	11°♄47'20		conjunction	-4682 Nov 19 j 05:54	23°♄22'32	0°-29'-55	
	-4687 Nov 22 j 05:40	0°♄		minimum elong	-4682 Nov 19 j 03:23	23°♄17'36	0°29'59	
asc. node	-4686 Jan 01 j 21:27	21°♄11'31			-4682 Nov 27 j 15:47	0°♄		
	-4686 Jan 17 j 11:51	0°♄			-4681 Jan 04 j 23:45	0°♄		
	-4686 Mar 09 j 09:31	0°♄		morning rise	-4681 Jan 25 j 23:50	16°♄08'55		
	-4686 Apr 27 j 07:58	0°♄			-4681 Feb 13 j 08:08	0°♄		
	-4686 Jun 13 j 12:54	0°♄			-4681 Mar 26 j 11:10	0°♄		
evening set	-4686 Jun 16 j 21:44	2°♄11'17			-4681 May 09 j 00:57	0°♄		
max. Earth dist.	-4686 Jul 09 j 08:30	16°♄57'12	2.59200 AU		-4681 Jun 24 j 21:21	0°♄		
	-4686 Jul 28 j 18:30	0°♄			-4681 Aug 16 j 15:03	0°♄		
				asc. node	-4681 Aug 25 j 01:36	4°♄14'01		
conjunction	-4686 Aug 03 j 12:59	3°♄55'40	1°10'40	retrograde	-4681 Nov 02 j 04:49	24°♄59'39		
minimum elong	-4686 Aug 03 j 13:23	3°♄56'19	1°10'53	opposition	-4681 Dec 11 j 12:24	15°♄40'57	3°36'25	
	-4686 Sep 09 j 23:04	0°♄		greatest brilliancy	-4681 Dec 11 j 19:37	15°♄33'46	-1.3m	
morning rise	-4686 Sep 21 j 03:35	7°♄59'54		min. Earth dist.	-4681 Dec 13 j 19:47	14°♄45'57	0.66380 AU	
	-4686 Oct 21 j 07:36	0°♄		direct	-4680 Jan 21 j 13:58	5°♄41'19		
	-4686 Nov 30 j 07:14	0°♄			-4680 Apr 06 j 11:49	0°♄		
desc. node	-4685 Jan 03 j 03:06	25°♄50'50			-4680 May 27 j 21:54	0°♄		
	-4685 Jan 08 j 13:03	0°♄			-4680 Jul 11 j 11:16	0°♄		
	-4685 Feb 16 j 20:55	0°♄			-4680 Aug 21 j 12:15	0°♄		
	-4685 Mar 29 j 09:38	0°♄		desc. node	-4680 Aug 24 j 18:07	2°♄26'54		
	-4685 May 11 j 22:51	0°♄			-4680 Sep 29 j 13:32	0°♄		
	-4685 Jul 03 j 01:48	0°♄		greatest brilliancy	-4680 Oct 24 j 01:00	19°♄11'29	1.2m	
retrograde	-4685 Aug 24 j 06:10	14°♄28'56			-4680 Nov 06 j 18:47	0°♄		
min. Earth dist.	-4685 Sep 27 j 15:37	6°♄38'28	0.59927 AU	evening set	-4680 Nov 23 j 04:33	12°♄52'34		
opposition	-4685 Oct 02 j 18:56	4°♄35'56	-1°-57'-46		-4680 Dec 15 j 04:31	0°♄		
greatest brilliancy	-4685 Oct 02 j 07:08	4°♄47'41	-1.6m		-4679 Jan 23 j 15:57	0°♄		
	-4685 Oct 15 j 07:27	30°♄						
direct	-4685 Nov 09 j 01:26	25°♄55'57		conjunction	-4679 Jan 26 j 12:48	2°♄08'02	-1°-8'-11	
asc. node	-4685 Nov 19 j 22:52	26°♄39'03		minimum elong	-4679 Jan 26 j 13:11	2°♄08'46	1°08'27	
	-4685 Dec 06 j 06:07	0°♄			-4679 Mar 05 j 21:15	0°♄		
	-4684 Feb 13 j 03:54	0°♄		max. Earth dist.	-4679 Mar 12 j 02:56	4°♄24'40	2.48281 AU	
	-4684 Apr 06 j 00:38	0°♄		morning rise	-4679 Mar 28 j 10:20	15°♄47'13		
	-4684 May 24 j 14:22	0°♄			-4679 Apr 18 j 06:22	0°♄		
	-4684 Jul 09 j 03:26	0°♄			-4679 Jun 02 j 23:21	0°♄		
evening set	-4684 Jul 28 j 06:06	13°♄08'49		asc. node	-4679 Jul 12 j 00:43	24°♄23'43		
max. Earth dist.	-4684 Aug 12 j 13:51	23°♄55'46	2.48257 AU		-4679 Jul 21 j 07:04	0°♄		
	-4684 Aug 21 j 01:44	0°♄			-4679 Sep 11 j 23:19	0°♄		
					-4679 Nov 30 j 20:11	0°♄		
conjunction	-4684 Sep 18 j 11:41	20°♄45'50	0°41'21	retrograde	-4679 Dec 10 j 02:27	0°♄30'22		
minimum elong	-4684 Sep 18 j 13:42	20°♄49'35	0°41'30		-4679 Dec 19 j 00:56	30°♄		
	-4684 Sep 30 j 20:14	0°♄		opposition	-4678 Jan 16 j 14:10	22°♄08'03	5°07'11	
	-4684 Nov 09 j 02:22	0°♄		greatest brilliancy	-4678 Jan 17 j 22:32	21°♄37'09	-1.5m	
morning rise	-4684 Nov 15 j 02:12	4°♄38'52		min. Earth dist.	-4678 Jan 22 j 15:09	19°♄49'51	0.60161 AU	
desc. node	-4684 Nov 20 j 00:12	8°♄28'12		direct	-4678 Feb 26 j 08:10	12°♄19'00		
	-4684 Dec 17 j 14:20	0°♄			-4678 Apr 27 j 10:44	0°♄		
	-4683 Jan 25 j 04:28	0°♄			-4678 Jun 17 j 10:59	0°♄		
	-4683 Mar 05 j 18:25	0°♄		desc. node	-4678 Jul 12 j 16:37	17°♄14'56		
	-4683 Apr 16 j 07:38	0°♄			-4678 Jul 30 j 09:59	0°♄		
	-4683 May 31 j 04:35	0°♄			-4678 Sep 08 j 07:28	0°♄		
	-4683 Jul 21 j 22:52	0°♄			-4678 Oct 17 j 01:37	0°♄		
retrograde	-4683 Sep 28 j 06:07	21°♄15'06			-4678 Nov 24 j 22:56	0°♄		
asc. node	-4683 Oct 07 j 01:01	20°♄43'57		evening set	-4677 Jan 03 j 22:15	0°♄		
min. Earth dist.	-4683 Nov 05 j 18:51	11°♄59'38	0.66245 AU		-4677 Jan 25 j 19:41	15°♄55'42		
opposition	-4683 Nov 07 j 06:06	11°♄24'08	1°10'32		-4677 Feb 14 j 14:48	0°♄		
greatest brilliancy	-4683 Nov 07 j 03:13	11°♄27'02	-1.3m					
direct	-4683 Dec 17 j 01:16	1°♄49'47		conjunction	-4677 Mar 22 j 19:19	24°♄56'51	0°-37'-34	
	-4682 Mar 12 j 02:35	0°♄		minimum elong	-4677 Mar 22 j 21:00	24°♄59'41	0°37'43	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 23

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4677 Mar 30 j 07:16	0° H			-4672 Mar 29 j 18:35	0° H		
max. Earth dist.	-4677 Apr 16 j 14:12	11° H 31'11	2.59526 AU		-4672 May 28 j 08:38	0° H		
morning rise	-4677 May 13 j 14:58	29° H 11'48		retrograde	-4672 Jun 21 j 03:10	3° H 47'35		
	-4677 May 14 j 20:46	0° Y			-4672 Jul 14 j 16:18	30° R H		
asc. node	-4677 May 29 j 22:17	9° Y 41'23		min. Earth dist.	-4672 Jul 18 j 08:06	28° H 52'20	0.43564 AU	
	-4677 Jun 30 j 23:10	0° H		greatest brilliancy	-4672 Jul 24 j 02:18	26° H 59'29	-2.5m	
	-4677 Aug 18 j 10:35	0° H		opposition	-4672 Jul 26 j 05:53	26° H 17'00	-6°-19'-34	
	-4677 Oct 08 j 03:50	0° H		direct	-4672 Aug 26 j 22:21	20° H 07'40		
	-4677 Dec 05 j 11:41	0° H			-4672 Oct 08 j 20:23	0° H		
retrograde	-4676 Jan 29 j 06:52	14° H 02'59			-4672 Dec 07 j 04:13	0° \approx		
opposition	-4676 Mar 03 j 12:28	7° H 14'32	4°33'25	asc. node	-4671 Jan 18 j 13:04	24° \approx 52'35		
greatest brilliancy	-4676 Mar 05 j 11:32	6° H 34'19	-2.1m		-4671 Jan 27 j 01:29	0° H		
min. Earth dist.	-4676 Mar 11 j 23:55	4° H 22'08	0.48467 AU		-4671 Mar 17 j 05:42	0° Y		
	-4676 Mar 28 j 15:42	30° R H			-4671 May 04 j 11:08	0° H		
direct	-4676 Apr 10 j 03:54	28° H 54'26		evening set	-4671 Jun 01 j 17:36	17° H 56'26		
	-4676 Apr 23 j 00:05	0° H			-4671 Jun 20 j 10:22	0° H		
desc. node	-4676 May 29 j 18:35	12° H 44'39		max. Earth dist.	-4671 Jun 28 j 15:15	5° H 20'47	2.62326 AU	
	-4676 Jun 29 j 10:15	0° H						
	-4676 Aug 12 j 17:17	0° H		conjunction	-4671 Jul 18 j 16:16	18° H 34'03	1°10'43	
	-4676 Sep 22 j 15:19	0° H		minimum elong	-4671 Jul 18 j 15:53	18° H 33'25	1°10'57	
	-4676 Nov 02 j 00:42	0° H			-4671 Aug 04 j 17:15	0° H		
	-4676 Dec 13 j 05:32	0° H		morning rise	-4671 Sep 03 j 12:43	20° H 27'03		
	-4675 Jan 24 j 22:38	0° \approx			-4671 Sep 17 j 03:55	0° H		
	-4675 Mar 10 j 09:36	0° H			-4671 Oct 28 j 21:50	0° H		
evening set	-4675 Mar 15 j 04:20	3° H 09'42			-4671 Dec 08 j 08:38	0° H		
asc. node	-4675 Apr 15 j 17:49	23° H 47'21			-4670 Jan 17 j 02:28	0° H		
	-4675 Apr 25 j 08:27	0° Y		desc. node	-4670 Jan 19 j 20:47	2° H 05'29		
					-4670 Feb 25 j 23:57	0° H		
conjunction	-4675 May 04 j 03:02	5° Y 38'48	0°10'24		-4670 Apr 08 j 10:19	0° H		
minimum elong	-4675 May 04 j 02:37	5° Y 38'08	0°10'25		-4670 May 24 j 09:13	0° \approx		
behind sun begin	-4675 May 03 j 11:19	5° Y 13'35		retrograde	-4670 Aug 08 j 19:12	28° \approx 09'35		
behind sun end	-4675 May 04 j 17:54	6° Y 02'40		min. Earth dist.	-4670 Sep 10 j 05:33	21° \approx 02'31	0.55937 AU	
max. Earth dist.	-4675 May 11 j 23:06	10° Y 40'31	2.65853 AU	opposition	-4670 Sep 16 j 16:45	18° \approx 31'46	-3°-20'-14	
	-4675 Jun 11 j 05:17	0° H		greatest brilliancy	-4670 Sep 15 j 16:23	18° \approx 55'30	-1.8m	
morning rise	-4675 Jun 20 j 02:38	5° H 39'41		direct	-4670 Oct 22 j 15:26	10° \approx 23'32		
	-4675 Jul 28 j 08:34	0° H		asc. node	-4670 Dec 06 j 13:44	20° \approx 31'18		
	-4675 Sep 13 j 10:19	0° H			-4670 Dec 28 j 10:21	0° H		
	-4675 Oct 30 j 16:04	0° H			-4669 Feb 23 j 03:06	0° Y		
	-4675 Dec 18 j 03:42	0° H			-4669 Apr 14 j 22:14	0° H		
	-4674 Feb 10 j 01:19	0° H			-4669 Jun 01 j 19:37	0° H		
retrograde	-4674 Apr 11 j 01:23	17° H 36'47		evening set	-4669 Jul 12 j 00:09	26° H 29'28		
desc. node	-4674 Apr 16 j 20:15	17° H 24'10			-4669 Jul 17 j 04:26	0° H		
opposition	-4674 May 11 j 15:00	12° H 33'10	-1°-52'-1	max. Earth dist.	-4669 Jul 28 j 23:48	8° H 04'51	2.52972 AU	
greatest brilliancy	-4674 May 11 j 18:32	12° H 30'47	-2.9m		-4669 Aug 29 j 04:25	0° H		
min. Earth dist.	-4674 May 13 j 16:03	12° H 00'11	0.38080 AU					
direct	-4674 Jun 11 j 12:10	7° H 16'10		conjunction	-4669 Aug 30 j 20:54	1° H 12'30	0°58'21	
	-4674 Aug 17 j 05:34	0° H		minimum elong	-4669 Aug 30 j 22:35	1° H 15'32	0°58'32	
	-4674 Oct 05 j 00:43	0° H			-4669 Oct 09 j 03:35	0° H		
	-4674 Nov 19 j 09:35	0° H		morning rise	-4669 Oct 23 j 02:04	10° H 29'03		
	-4673 Jan 03 j 16:41	0° \approx			-4669 Nov 17 j 15:25	0° H		
	-4673 Feb 18 j 19:28	0° H		desc. node	-4669 Dec 07 j 18:39	15° H 33'42		
asc. node	-4673 Mar 03 j 14:06	8° H 12'38			-4669 Dec 26 j 08:57	0° H		
	-4673 Apr 06 j 17:41	0° Y			-4668 Feb 03 j 03:52	0° H		
evening set	-4673 Apr 25 j 06:24	11° Y 46'13			-4668 Mar 13 j 23:00	0° H		
	-4673 May 23 j 22:43	0° H			-4668 Apr 24 j 22:20	0° \approx		
max. Earth dist.	-4673 Jun 04 j 14:36	7° H 26'21	2.66766 AU		-4668 Jun 10 j 02:04	0° H		
					-4668 Aug 08 j 02:02	0° Y		
conjunction	-4673 Jun 11 j 10:14	11° H 47'51	0°50'26	retrograde	-4668 Sep 14 j 16:13	7° Y 48'13		
minimum elong	-4673 Jun 11 j 08:56	11° H 45'46	0°50'35		-4668 Oct 19 j 07:32	30° R H		
	-4673 Jul 09 j 17:01	0° H		min. Earth dist.	-4668 Oct 21 j 17:33	29° H 02'09	0.64492 AU	
morning rise	-4673 Jul 26 j 18:43	11° H 06'11		asc. node	-4668 Oct 23 j 15:05	28° H 16'17		
	-4673 Aug 24 j 11:11	0° H		opposition	-4668 Oct 24 j 15:47	27° H 51'23	0°02'25	
	-4673 Oct 08 j 00:21	0° H		greatest brilliancy	-4668 Oct 24 j 15:33	27° H 51'37	-1.4m	
	-4673 Nov 20 j 11:06	0° H		direct	-4668 Dec 02 j 14:53	18° H 34'25		
	-4672 Jan 02 j 04:18	0° H			-4667 Jan 20 j 16:08	0° Y		
	-4672 Feb 13 j 21:59	0° H			-4667 Mar 22 j 11:34	0° H		
desc. node	-4672 Mar 03 j 20:52	13° H 00'05			-4667 May 11 j 23:49	0° H		

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 24

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4667 Jun 27 j 03:48	0°☿		conjunction	-4662 Mar 03 j 04:19	6°≈32°05	0°-53'-55
	-4667 Aug 09 j 04:48	0°♂		minimum elong	-4662 Mar 03 j 06:24	6°≈35°44	0°54'07
evening set	-4667 Aug 27 j 12:53	13°♂20'54		max. Earth dist.	-4662 Apr 04 j 18:18	28°≈54°42	2.55625 AU
	-4667 Sep 18 j 20:25	0°♊			-4662 Apr 06 j 09:02	0°♋	
max. Earth dist.	-4667 Sep 18 j 18:13	29°♂55'51	2.40755 AU	morning rise	-4662 Apr 27 j 00:46	13°♋46'12	
					-4662 May 21 j 21:42	0°♌	
conjunction	-4667 Oct 24 j 03:39	27°♊05'29	0°00'21	asc. node	-4662 Jun 15 j 13:21	15°♌44'58	
minimum elong	-4667 Oct 24 j 03:38	27°♊05'26	0°00'22		-4662 Jul 08 j 07:06	0°♍	
behind sun begin	-4667 Oct 23 j 01:46	26°♊15'13			-4662 Aug 26 j 19:22	0°♎	
behind sun end	-4667 Oct 25 j 05:29	27°♊55'40			-4662 Oct 19 j 21:19	0°☿	
desc. node	-4667 Oct 24 j 14:58	27°♊27'26		retrograde	-4661 Jan 07 j 18:09	25°☿45'10	
	-4667 Oct 27 j 21:22	0°♋		opposition	-4661 Feb 12 j 10:34	18°☿14'07	5°11'18
	-4667 Dec 05 j 04:01	0°♌		greatest brilliancy	-4661 Feb 14 j 08:53	17°☿32'08	-1.9m
morning rise	-4667 Dec 28 j 08:10	18°♌09'42		min. Earth dist.	-4661 Feb 20 j 07:55	15°☿23'20	0.53527 AU
	-4666 Jan 12 j 13:26	0°♍		direct	-4661 Mar 23 j 18:10	9°☿05'06	
	-4666 Feb 20 j 22:34	0°♎			-4661 May 27 j 01:57	0°♏	
	-4666 Apr 03 j 03:09	0°≈		desc. node	-4661 Jun 16 j 10:35	11°♏56'02	
	-4666 May 16 j 23:20	0°♐			-4661 Jul 13 j 21:14	0°♑	
	-4666 Jul 03 j 20:30	0°♒			-4661 Aug 24 j 11:01	0°♓	
	-4666 Aug 30 j 17:42	0°♈			-4661 Oct 03 j 03:37	0°♉	
asc. node	-4666 Sep 10 j 16:22	4°♈16'26			-4661 Nov 11 j 17:32	0°♊	
retrograde	-4666 Oct 19 j 10:49	12°♈06'23			-4661 Dec 22 j 06:57	0°♋	
opposition	-4666 Nov 28 j 03:46	2°♈32'13	2°45'14		-4660 Feb 02 j 11:38	0°≈	
greatest brilliancy	-4666 Nov 28 j 04:37	2°♈31'22	-1.3m	evening set	-4660 Feb 26 j 07:23	16°≈22'32	
min. Earth dist.	-4666 Nov 28 j 23:18	2°♈12'39	0.67099 AU		-4660 Mar 17 j 13:05	0°♌	
	-4666 Dec 04 j 13:28	30°♈♊		conjunction	-4660 Apr 18 j 04:48	20°♌51'56	0°-8'-8
direct	-4665 Jan 07 j 21:12	22°♊39'05		minimum elong	-4660 Apr 18 j 05:08	20°♌52'30	0°08'12
	-4665 Feb 14 j 20:14	0°♈		behind sun begin	-4660 Apr 17 j 11:09	20°♌23'12	
	-4665 Apr 18 j 17:51	0°♎		behind sun end	-4660 Apr 18 j 23:08	21°♌21'47	
	-4665 Jun 06 j 14:15	0°☿		max. Earth dist.	-4660 May 02 j 06:15	29°♌59'36	2.64001 AU
	-4665 Jul 20 j 10:35	0°♏		asc. node	-4660 May 02 j 10:26	0°♌06'22	
desc. node	-4665 Aug 30 j 05:52	0°♑			-4660 May 02 j 06:30	0°♍	
	-4665 Sep 11 j 12:30	9°♑20'18		morning rise	-4660 Jun 05 j 15:58	22°♑03'56	
	-4665 Oct 08 j 04:55	0°♒			-4660 Jun 18 j 03:24	0°♎	
evening set	-4665 Oct 28 j 01:53	15°♒35'48			-4660 Aug 04 j 15:16	0°♏	
	-4665 Nov 15 j 08:43	0°♓			-4660 Sep 21 j 16:12	0°☿	
	-4665 Dec 23 j 16:32	0°♈			-4660 Nov 10 j 02:59	0°♏	
conjunction	-4664 Jan 01 j 11:56	6°♈48'10	-1°-3'-36		-4659 Jan 03 j 19:07	0°♑	
minimum elong	-4664 Jan 01 j 09:45	6°♈43'58	1°03'48	retrograde	-4659 Mar 10 j 23:03	19°♑45'43	
	-4664 Feb 01 j 01:28	0°♎		opposition	-4659 Apr 11 j 10:43	14°♑13'27	1°32'19
max. Earth dist.	-4664 Feb 19 j 08:31	13°♎31'46	2.43091 AU	greatest brilliancy	-4659 Apr 12 j 02:12	14°♑02'07	-2.6m
morning rise	-4664 Mar 06 j 12:19	25°♎14'06		min. Earth dist.	-4659 Apr 17 j 21:54	12°♑20'03	0.40932 AU
	-4664 Mar 13 j 04:26	0°≈		desc. node	-4659 May 03 j 11:52	8°♑43'35	
	-4664 Apr 25 j 13:05	0°♐		direct	-4659 May 15 j 02:52	7°♑49'14	
	-4664 Jun 10 j 12:04	0°♒			-4659 Jul 18 j 16:46	0°♓	
asc. node	-4664 Jul 28 j 15:59	29°♒19'03			-4659 Sep 03 j 21:14	0°♉	
	-4664 Jul 29 j 20:12	0°♈			-4659 Oct 17 j 03:11	0°♊	
	-4664 Sep 24 j 20:17	0°♎			-4659 Nov 29 j 02:39	0°♋	
retrograde	-4664 Nov 24 j 03:37	16°♎21'14			-4658 Jan 12 j 01:12	0°≈	
opposition	-4663 Jan 01 j 12:04	7°♎33'24	4°40'32		-4658 Feb 26 j 08:00	0°♌	
greatest brilliancy	-4663 Jan 02 j 09:34	7°♎12'27	-1.4m	asc. node	-4658 Mar 20 j 06:52	14°♌15'16	
min. Earth dist.	-4663 Jan 06 j 02:31	5°♎45'53	0.63357 AU	evening set	-4658 Apr 09 j 20:32	27°♌29'10	
	-4663 Jan 23 j 10:41	30°♎♏			-4658 Apr 13 j 18:40	0°♍	
direct	-4663 Feb 11 j 14:32	27°♏34'22		conjunction	-4658 May 27 j 18:55	28°♌05'27	0°36'40
	-4663 Mar 03 j 23:29	0°♎		minimum elong	-4658 May 27 j 17:45	28°♌03'36	0°36'45
	-4663 May 11 j 06:30	0°☿		max. Earth dist.	-4658 May 26 j 13:37	27°♌18'45	2.67043 AU
desc. node	-4663 Jun 27 j 08:28	0°♏			-4658 May 30 j 18:46	0°♎	
	-4663 Jul 29 j 11:03	22°♏46'37		morning rise	-4658 Jul 12 j 10:37	27°♏18'47	
	-4663 Aug 08 j 06:02	0°♑			-4658 Jul 16 j 14:45	0°♏	
	-4663 Sep 16 j 16:22	0°♒			-4658 Aug 31 j 18:14	0°☿	
	-4663 Oct 25 j 03:19	0°♓			-4658 Oct 16 j 01:44	0°♏	
	-4663 Dec 02 j 18:09	0°♈			-4658 Nov 29 j 18:39	0°♑	
evening set	-4662 Jan 02 j 18:50	23°♈32'47			-4657 Jan 13 j 11:15	0°♒	
	-4662 Jan 11 j 10:54	0°♎			-4657 Feb 28 j 19:10	0°♓	
	-4662 Feb 21 j 21:18	0°≈		desc. node	-4657 Mar 21 j 14:02	12°♓20'37	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 25

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4657 Apr 27 j 13:09	0°♊			-4652 Jul 04 j 10:38	0°♊	
retrograde	-4657 May 28 j 08:49	5°♊59'07		evening set	-4652 Aug 07 j 15:54	23°♊44'14	
min. Earth dist.	-4657 Jun 24 j 06:41	1°♊31'24	0.39509 AU		-4652 Aug 16 j 10:23	0°♊	
greatest brilliancy	-4657 Jun 28 j 10:09	0°♊19'12	-2.7m	max. Earth dist.	-4652 Aug 23 j 11:54	5°♊05'44	2.45560 AU
opposition	-4657 Jun 29 j 23:23	29°♊51'57	-6°-4'-1		-4652 Sep 26 j 04:20	0°♊	
	-4657 Jun 29 j 12:23	30°♊					
direct	-4657 Jul 30 j 05:18	24°♊32'52		conjunction	-4652 Sep 30 j 13:23	3°♊18'13	0°28'20
	-4657 Aug 29 j 14:40	0°♊		minimum elong	-4652 Sep 30 j 15:06	3°♊21'28	0°28'27
	-4657 Oct 30 j 12:26	0°♊			-4652 Nov 04 j 08:39	0°♊	
	-4657 Dec 19 j 09:46	0°♊		desc. node	-4652 Nov 10 j 10:44	4°♊43'49	
asc. node	-4656 Feb 05 j 04:19	29°♊41'13		morning rise	-4652 Nov 29 j 22:42	19°♊57'29	
	-4656 Feb 05 j 16:22	0°♊		greatest brilliancy	-4652 Dec 07 j 17:19	26°♊02'50	1.2m
	-4656 Mar 24 j 17:36	0°♊			-4652 Dec 12 j 18:27	0°♊	
	-4656 May 11 j 11:01	0°♊			-4651 Jan 20 j 06:09	0°♊	
evening set	-4656 May 17 j 19:09	4°♊01'10			-4651 Feb 28 j 17:00	0°♊	
max. Earth dist.	-4656 Jun 18 j 12:20	24°♊19'07	2.64682 AU		-4651 Apr 11 j 01:06	0°♊	
	-4656 Jun 27 j 06:52	0°♊			-4651 May 25 j 08:56	0°♊	
					-4651 Jul 14 j 02:40	0°♊	
conjunction	-4656 Jul 03 j 12:26	4°♊03'22	1°05'54	asc. node	-4651 Sep 27 j 06:19	28°♊45'27	
minimum elong	-4656 Jul 03 j 11:29	4°♊01'49	1°06'07	retrograde	-4651 Oct 06 j 00:01	29°♊13'53	
	-4656 Aug 11 j 16:46	0°♊		opposition	-4651 Nov 14 j 22:38	19°♊27'45	1°47'20
morning rise	-4656 Aug 18 j 08:24	4°♊29'13		min. Earth dist.	-4651 Nov 14 j 06:37	19°♊43'53	0.66824 AU
	-4656 Sep 24 j 11:33	0°♊		greatest brilliancy	-4651 Nov 14 j 20:04	19°♊30'21	-1.3m
	-4656 Nov 05 j 17:57	0°♊		direct	-4651 Dec 25 j 03:09	9°♊45'36	
	-4656 Dec 16 j 20:08	0°♊			-4650 Mar 04 j 03:01	0°♊	
	-4655 Jan 26 j 07:59	0°♊			-4650 Apr 28 j 04:32	0°♊	
desc. node	-4655 Feb 05 j 13:37	7°♊34'46			-4650 Jun 14 j 15:10	0°♊	
	-4655 Mar 08 j 04:49	0°♊			-4650 Jul 28 j 01:31	0°♊	
	-4655 Apr 20 j 11:25	0°♊			-4650 Sep 06 j 18:27	0°♊	
	-4655 Jun 12 j 19:00	0°♊		desc. node	-4650 Sep 28 j 07:01	16°♊27'09	
retrograde	-4655 Jul 22 j 18:43	9°♊38'36		evening set	-4650 Oct 02 j 03:53	19°♊26'40	
min. Earth dist.	-4655 Aug 22 j 01:01	3°♊21'52	0.51266 AU		-4650 Oct 15 j 17:32	0°♊	
greatest brilliancy	-4655 Aug 28 j 00:13	1°♊08'46	-2.0m		-4650 Nov 22 j 21:42	0°♊	
opposition	-4655 Aug 29 j 14:52	0°♊32'36	-4°-43'-12				
	-4655 Aug 31 j 01:59	30°♊		conjunction	-4650 Dec 04 j 17:27	9°♊18'09	0°-45'-11
direct	-4655 Oct 03 j 01:15	23°♊04'21		minimum elong	-4650 Dec 04 j 14:10	9°♊11'41	0°45'18
	-4655 Nov 07 j 18:45	0°♊			-4650 Dec 31 j 05:14	0°♊	
asc. node	-4655 Dec 23 j 04:22	20°♊13'26		max. Earth dist.	-4649 Jan 07 j 10:07	5°♊34'24	2.38507 AU
	-4654 Jan 10 j 13:35	0°♊			-4649 Feb 08 j 12:55	0°♊	
	-4654 Mar 03 j 22:59	0°♊		morning rise	-4649 Feb 10 j 08:58	1°♊22'20	
	-4654 Apr 22 j 11:02	0°♊			-4649 Mar 21 j 14:41	0°♊	
	-4654 Jun 08 j 21:27	0°♊			-4649 May 04 j 00:39	0°♊	
evening set	-4654 Jun 25 j 18:55	11°♊01'14			-4649 Jun 19 j 09:57	0°♊	
max. Earth dist.	-4654 Jul 16 j 00:43	24°♊29'11	2.57169 AU		-4649 Aug 09 j 10:42	0°♊	
	-4654 Jul 24 j 04:30	0°♊		asc. node	-4649 Aug 15 j 07:03	3°♊09'23	
					-4649 Oct 18 j 09:29	0°♊	
conjunction	-4654 Aug 13 j 01:03	13°♊37'48	1°08'03	retrograde	-4649 Nov 10 j 08:21	2°♊56'33	
minimum elong	-4654 Aug 13 j 01:57	13°♊39'22	1°08'17		-4649 Dec 01 j 14:35	30°♊	
	-4654 Sep 05 j 07:37	0°♊		opposition	-4649 Dec 19 j 08:42	23°♊47'38	4°02'30
morning rise	-4654 Oct 02 j 00:18	19°♊17'25		greatest brilliancy	-4649 Dec 19 j 20:30	23°♊35'59	-1.3m
	-4654 Oct 16 j 12:49	0°♊		min. Earth dist.	-4649 Dec 22 j 11:33	22°♊33'42	0.65580 AU
	-4654 Nov 25 j 07:46	0°♊		direct	-4648 Jan 29 j 12:09	13°♊46'29	
desc. node	-4654 Dec 24 j 12:51	22°♊25'58			-4648 Mar 28 j 13:23	0°♊	
	-4653 Jan 03 j 08:27	0°♊			-4648 May 21 j 21:26	0°♊	
	-4653 Feb 11 j 10:22	0°♊			-4648 Jul 06 j 03:58	0°♊	
	-4653 Mar 23 j 14:20	0°♊		desc. node	-4648 Aug 15 j 04:06	29°♊01'20	
	-4653 May 05 j 08:19	0°♊			-4648 Aug 16 j 11:25	0°♊	
	-4653 Jun 23 j 03:25	0°♊			-4648 Sep 24 j 15:23	0°♊	
retrograde	-4653 Sep 01 j 15:32	23°♊34'30			-4648 Nov 01 j 22:11	0°♊	
min. Earth dist.	-4653 Oct 07 j 01:03	15°♊22'40	0.61814 AU	evening set	-4648 Dec 08 j 07:57	28°♊25'04	
opposition	-4653 Oct 11 j 09:49	13°♊37'47	-1°-12'-1		-4648 Dec 10 j 09:05	0°♊	
greatest brilliancy	-4653 Oct 11 j 03:33	13°♊44'03	-1.5m		-4647 Jan 18 j 21:31	0°♊	
asc. node	-4653 Nov 10 j 05:36	5°♊08'56					
direct	-4653 Nov 18 j 08:05	4°♊43'05		conjunction	-4647 Feb 09 j 03:40	15°♊38'12	-1°-5'-23
	-4652 Feb 05 j 16:24	0°♊		minimum elong	-4647 Feb 09 j 05:07	15°♊40'50	1°05'38
	-4652 Mar 31 j 11:57	0°♊			-4647 Mar 01 j 03:42	0°♊	
	-4652 May 19 j 16:08	0°♊		max. Earth dist.	-4647 Mar 21 j 17:23	14°♊25'11	2.51053 AU

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 26

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

morning rise	-4647 Apr 08 j 17:58	26° 34 46'15		greatest brilliancy	-4642 May 29 j 12:52	0° 11 12'35	-2.9m
	-4647 Apr 13 j 12:32	0° 11			-4642 May 30 j 07:48	30° 11	
	-4647 May 29 j 02:26	0° 11		direct	-4642 Jun 28 j 19:29	25° 11 07'30	
asc. node	-4647 Jul 02 j 06:33	21° 11 34'38			-4642 Jul 27 j 02:00	0° 11	
	-4647 Jul 15 j 23:11	0° 11			-4642 Sep 25 j 16:26	0° 11	
	-4647 Sep 05 j 02:47	0° 11			-4642 Nov 12 j 14:11	0° 11	
	-4647 Nov 05 j 20:17	0° 11			-4642 Dec 29 j 00:33	0° 11	
retrograde	-4647 Dec 19 j 22:08	9° 11 32'13			-4641 Feb 13 j 17:43	0° 11	
opposition	-4646 Jan 25 j 19:52	1° 11 26'06	5°14'56	asc. node	-4641 Feb 21 j 20:22	5° 11 10'06	
greatest brilliancy	-4646 Jan 27 j 09:56	0° 11 50'16	-1.6m		-4641 Apr 01 j 23:56	0° 11	
	-4646 Jan 29 j 15:14	30° 11		evening set	-4641 May 03 j 21:23	20° 11 11'00	
min. Earth dist.	-4646 Feb 01 j 13:59	28° 11 53'53	0.58034 AU		-4641 May 19 j 08:37	0° 11	
direct	-4646 Mar 07 j 04:35	21° 11 47'11		max. Earth dist.	-4641 Jun 10 j 00:24	13° 11 49'05	2.66262 AU
	-4646 Apr 14 j 14:26	0° 11					
	-4646 Jun 10 j 10:05	0° 11		conjunction	-4641 Jun 19 j 18:40	20° 11 04'55	0°57'05
desc. node	-4646 Jul 03 j 03:54	14° 11 59'25		minimum elong	-4641 Jun 19 j 17:25	20° 11 02'54	0°57'15
	-4646 Jul 24 j 12:24	0° 11			-4641 Jul 05 j 03:17	0° 11	
	-4646 Sep 02 j 20:37	0° 11		morning rise	-4641 Aug 04 j 03:37	19° 11 37'58	
	-4646 Oct 11 j 20:49	0° 11			-4641 Aug 19 j 18:30	0° 11	
	-4646 Nov 19 j 22:27	0° 11			-4641 Oct 03 j 00:39	0° 11	
	-4646 Dec 30 j 01:09	0° 11			-4641 Nov 15 j 00:08	0° 11	
evening set	-4645 Feb 06 j 19:16	27° 11 51'09			-4641 Dec 27 j 00:31	0° 11	
	-4645 Feb 09 j 20:39	0° 11			-4640 Feb 06 j 16:58	0° 11	
	-4645 Mar 25 j 15:02	0° 11		desc. node	-4640 Feb 23 j 08:08	11° 11 51'20	
					-4640 Mar 20 j 10:29	0° 11	
conjunction	-4645 Apr 02 j 03:52	5° 11 02'09	0°-27'00		-4640 May 07 j 16:36	0° 11	
minimum elong	-4645 Apr 02 j 05:05	5° 11 04'11	0°27'08	retrograde	-4640 Jul 03 j 12:23	18° 11 30'02	
max. Earth dist.	-4645 Apr 22 j 22:08	18° 11 44'55	2.61343 AU	min. Earth dist.	-4640 Jul 31 j 14:16	12° 11 34'51	0.46243 AU
	-4645 May 10 j 04:58	0° 11		greatest brilliancy	-4640 Aug 06 j 16:02	10° 11 39'10	-2.3m
asc. node	-4645 May 20 j 03:07	6° 11 24'14		opposition	-4640 Aug 08 j 18:00	9° 11 55'38	-5°-54'-40
morning rise	-4645 May 22 j 14:46	8° 11 00'06		direct	-4640 Sep 10 j 11:29	3° 11 16'21	
	-4645 Jun 26 j 04:09	0° 11			-4640 Nov 28 j 13:28	0° 11	
	-4645 Aug 13 j 04:57	0° 11		asc. node	-4639 Jan 08 j 18:41	22° 11 52'20	
	-4645 Oct 01 j 16:37	0° 11			-4639 Jan 21 j 00:05	0° 11	
	-4645 Nov 24 j 05:53	0° 11			-4639 Mar 12 j 02:09	0° 11	
retrograde	-4644 Feb 12 j 02:38	26° 11 11'39			-4639 Apr 29 j 17:05	0° 11	
opposition	-4644 Mar 16 j 10:37	19° 11 50'06	3°47'45	evening set	-4639 Jun 10 j 09:13	26° 11 38'19	
greatest brilliancy	-4644 Mar 18 j 03:35	19° 11 16'47	-2.3m		-4639 Jun 15 j 20:03	0° 11	
min. Earth dist.	-4644 Mar 24 j 18:51	17° 11 08'31	0.45611 AU	max. Earth dist.	-4639 Jul 04 j 17:37	12° 11 21'33	2.60698 AU
direct	-4644 Apr 21 j 20:42	12° 11 07'09					
desc. node	-4644 May 20 j 04:31	17° 11 11'39		conjunction	-4639 Jul 27 j 15:15	27° 11 38'10	1°11'19
	-4644 Jun 17 j 22:04	0° 11		minimum elong	-4639 Jul 27 j 15:18	27° 11 38'14	1°11'33
	-4644 Aug 05 j 00:12	0° 11			-4639 Jul 31 j 03:13	0° 11	
	-4644 Sep 16 j 04:24	0° 11			-4639 Sep 12 j 11:18	0° 11	
	-4644 Oct 27 j 06:37	0° 11		morning rise	-4639 Sep 13 j 08:13	0° 11 37'01	
	-4644 Dec 07 j 22:29	0° 11			-4639 Oct 24 j 00:49	0° 11	
	-4643 Jan 19 j 23:31	0° 11			-4639 Dec 03 j 05:40	0° 11	
	-4643 Mar 05 j 15:43	0° 11		desc. node	-4638 Jan 10 j 07:13	28° 11 56'18	
evening set	-4643 Mar 24 j 18:26	12° 11 32'06			-4638 Jan 11 j 16:38	0° 11	
asc. node	-4643 Apr 05 j 23:30	20° 11 28'16			-4638 Feb 20 j 05:32	0° 11	
	-4643 Apr 20 j 17:43	0° 11			-4638 Apr 02 j 00:52	0° 11	
					-4638 May 16 j 06:57	0° 11	
conjunction	-4643 May 12 j 20:56	14° 11 11'54	0°20'33		-4638 Jul 11 j 13:19	0° 11	
minimum elong	-4643 May 12 j 20:11	14° 11 10'41	0°20'35	retrograde	-4638 Aug 17 j 19:29	8° 11 07'54	
max. Earth dist.	-4643 May 17 j 10:25	17° 11 06'51	2.66510 AU	min. Earth dist.	-4638 Sep 20 j 08:17	0° 11 36'14	0.58222 AU
	-4643 Jun 06 j 14:59	0° 11			-4638 Sep 21 j 21:17	30° 11	
morning rise	-4643 Jun 28 j 06:07	13° 11 47'36		greatest brilliancy	-4638 Sep 25 j 09:35	28° 11 36'40	-1.7m
	-4643 Jul 23 j 15:02	0° 11		opposition	-4638 Sep 26 j 02:30	28° 11 19'58	-2°-32'-15
	-4643 Sep 08 j 07:34	0° 11		direct	-4638 Nov 01 j 18:56	19° 11 53'30	
	-4643 Oct 24 j 17:08	0° 11		asc. node	-4638 Nov 26 j 19:27	23° 11 23'59	
	-4643 Dec 10 j 09:52	0° 11			-4638 Dec 16 j 22:28	0° 11	
	-4642 Jan 28 j 02:37	0° 11			-4637 Feb 16 j 19:15	0° 11	
	-4642 Mar 30 j 06:48	0° 11			-4637 Apr 09 j 17:28	0° 11	
desc. node	-4642 Apr 07 j 05:54	2° 11 20'49			-4637 May 28 j 00:49	0° 11	
retrograde	-4642 Apr 29 j 04:27	5° 11 17'23			-4637 Jul 12 j 13:20	0° 11	
opposition	-4642 May 29 j 19:23	0° 11 08'15	-3°-50'-47	evening set	-4637 Jul 21 j 16:19	6° 11 13'45	
min. Earth dist.	-4642 May 28 j 18:49	0° 11 24'35	0.37728 AU	max. Earth dist.	-4637 Aug 06 j 12:00	17° 11 12'04	2.50422 AU

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 27

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4637 Aug 24 j 13:26	0°♈				-4632 Jul 24 j 02:20	0°♈	
						-4632 Sep 16 j 02:20	0°♈	
conjunction	-4637 Sep 10 j 17:45	12°♈26'09	0°49'33	retrograde		-4632 Dec 03 j 02:58	24°♈47'34	
minimum elong	-4637 Sep 10 j 19:43	12°♈29'45	0°49'43	opposition		-4631 Jan 10 j 00:17	16°♈13'09	4°57'17
	-4637 Oct 04 j 10:58	0°♈		greatest brilliancy		-4631 Jan 11 j 03:44	15°♈46'40	-1.5m
morning rise	-4637 Nov 05 j 05:58	24°♈09'17		min. Earth dist.		-4631 Jan 15 j 09:37	14°♈08'31	0.61700 AU
	-4637 Nov 12 j 20:02	0°♈		direct		-4631 Feb 19 j 22:35	6°♈18'34	
desc. node	-4637 Nov 28 j 04:14	11°♈53'02				-4631 May 03 j 04:56	0°♈	
	-4637 Dec 21 j 10:30	0°♈				-4631 Jun 21 j 06:28	0°♈	
	-4636 Jan 29 j 02:20	0°♈		desc. node		-4631 Jul 19 j 20:01	19°♈51'44	
	-4636 Mar 08 j 17:20	0°♈				-4631 Aug 02 j 18:31	0°♈	
	-4636 Apr 19 j 08:50	0°♈				-4631 Sep 11 j 11:13	0°♈	
	-4636 Jun 03 j 14:12	0°♈				-4631 Oct 20 j 01:58	0°♈	
	-4636 Jul 27 j 05:17	0°♈				-4631 Nov 27 j 19:51	0°♈	
retrograde	-4636 Sep 22 j 12:55	16°♈02'34				-4630 Jan 06 j 15:10	0°♈	
asc. node	-4636 Oct 13 j 21:27	12°♈55'34		evening set		-4630 Jan 16 j 03:43	7°♈00'14	
min. Earth dist.	-4636 Oct 30 j 09:40	7°♈00'07	0.65574 AU			-4630 Feb 17 j 03:43	0°♈	
opposition	-4636 Nov 01 j 13:03	6°♈08'19	0°42'50					
greatest brilliancy	-4636 Nov 01 j 10:39	6°♈10'43	-1.4m	conjunction		-4630 Mar 14 j 14:27	17°♈42'14	0°-44'-54
	-4636 Nov 18 j 12:13	30°♈		minimum elong		-4630 Mar 14 j 16:23	17°♈45'34	0°45'04
direct	-4636 Dec 10 j 23:43	26°♈41'20				-4630 Apr 01 j 16:42	0°♈	
	-4635 Jan 04 j 14:11	0°♈		max. Earth dist.		-4630 Apr 11 j 19:32	6°♈46'46	2.57873 AU
	-4635 Mar 15 j 22:13	0°♈		morning rise		-4630 May 06 j 16:14	23°♈10'19	
	-4635 May 06 j 16:45	0°♈				-4630 May 17 j 04:34	0°♈	
	-4635 Jun 22 j 06:58	0°♈		asc. node		-4630 Jun 05 j 19:43	12°♈36'25	
	-4635 Aug 04 j 11:31	0°♈				-4630 Jul 03 j 08:40	0°♈	
evening set	-4635 Sep 08 j 16:59	25°♈53'18				-4630 Aug 21 j 04:54	0°♈	
	-4635 Sep 14 j 04:00	0°♈				-4630 Oct 12 j 01:27	0°♈	
max. Earth dist.	-4635 Oct 13 j 10:09	22°♈24'46	2.38615 AU			-4630 Dec 15 j 22:30	0°♈	
desc. node	-4635 Oct 15 j 01:04	23°♈40'14		retrograde		-4629 Jan 19 j 12:35	6°♈15'19	
	-4635 Oct 23 j 04:17	0°♈				-4629 Feb 20 j 21:37	30°♈	
				opposition		-4629 Feb 23 j 11:01	29°♈06'40	4°54'30
conjunction	-4635 Nov 07 j 13:42	12°♈02'41	0°-16'-57	greatest brilliancy		-4629 Feb 25 j 10:59	28°♈24'27	-2.0m
minimum elong	-4635 Nov 07 j 12:15	11°♈59'51	0°16'59	min. Earth dist.		-4629 Mar 03 j 19:13	26°♈11'48	0.50778 AU
	-4635 Nov 30 j 09:41	0°♈		direct		-4629 Apr 02 j 22:45	20°♈21'59	
	-4634 Jan 07 j 17:49	0°♈				-4629 May 13 j 17:08	0°♈	
morning rise	-4634 Jan 13 j 14:33	4°♈32'16		desc. node		-4629 Jun 06 j 21:30	12°♈01'50	
	-4634 Feb 16 j 01:26	0°♈				-4629 Jul 06 j 04:53	0°♈	
	-4634 Mar 29 j 03:38	0°♈				-4629 Aug 18 j 01:45	0°♈	
	-4634 May 11 j 18:01	0°♈				-4629 Sep 27 j 08:32	0°♈	
	-4634 Jun 27 j 21:14	0°♈				-4629 Nov 06 j 07:47	0°♈	
	-4634 Aug 21 j 01:50	0°♈				-4629 Dec 17 j 04:08	0°♈	
asc. node	-4634 Aug 31 j 22:17	5°♈03'35				-4628 Jan 28 j 14:16	0°♈	
retrograde	-4634 Oct 27 j 07:57	19°♈57'13		evening set		-4628 Mar 07 j 16:55	26°♈35'16	
opposition	-4634 Dec 05 j 19:50	10°♈31'07	3°15'49			-4628 Mar 12 j 19:44	0°♈	
greatest brilliancy	-4634 Dec 05 j 23:53	10°♈27'05	-1.3m	asc. node		-4628 Apr 22 j 15:17	26°♈45'58	
min. Earth dist.	-4634 Dec 07 j 10:45	9°♈52'19	0.66822 AU					
direct	-4633 Jan 15 j 18:09	0°♈33'58		conjunction		-4628 Apr 27 j 10:45	29°♈52'39	0°02'47
	-4633 Apr 11 j 18:56	0°♈		minimum elong		-4628 Apr 27 j 10:37	29°♈52'26	0°02'45
	-4633 Jun 01 j 01:34	0°♈		behind sun begin		-4628 Apr 26 j 14:33	29°♈20'01	
	-4633 Jul 15 j 08:38	0°♈		behind sun end		-4628 Apr 28 j 06:42	0°♈24'50	
	-4633 Aug 25 j 08:20	0°♈				-4628 Apr 27 j 15:19	0°♈	
desc. node	-4633 Sep 01 j 22:04	5°♈43'54		max. Earth dist.		-4628 May 07 j 22:31	6°♈38'20	2.65142 AU
	-4633 Oct 03 j 09:11	0°♈				-4628 Jun 13 j 11:31	0°♈	
	-4633 Nov 10 j 13:49	0°♈		morning rise		-4628 Jun 14 j 00:23	0°♈20'27	
evening set	-4633 Nov 12 j 07:40	1°♈22'19				-4628 Jul 30 j 18:13	0°♈	
	-4633 Dec 18 j 22:14	0°♈				-4628 Sep 16 j 05:11	0°♈	
						-4628 Nov 03 j 06:40	0°♈	
conjunction	-4632 Jan 16 j 11:25	21°♈51'29	-1°-7'-49			-4628 Dec 23 j 17:31	0°♈	
minimum elong	-4632 Jan 16 j 10:44	21°♈50'10	1°08'03			-4627 Feb 25 j 07:31	0°♈	
	-4632 Jan 27 j 07:26	0°♈		retrograde		-4627 Mar 28 j 02:33	5°♈19'28	
max. Earth dist.	-4632 Mar 03 j 18:53	26°♈34'16	2.45955 AU	desc. node		-4627 Apr 23 j 23:18	1°♈13'03	
	-4632 Mar 08 j 10:17	0°♈		opposition		-4627 Apr 27 j 22:49	0°♈07'31	0°-17'-41
morning rise	-4632 Mar 19 j 06:52	7°♈40'25		greatest brilliancy		-4627 Apr 28 j 00:24	0°♈06'25	-2.8m
	-4632 Apr 20 j 17:34	0°♈				-4627 Apr 28 j 09:38	30°♈	
	-4632 Jun 05 j 11:16	0°♈		min. Earth dist.		-4627 May 02 j 05:44	28°♈56'04	0.39046 AU
asc. node	-4632 Jul 18 j 21:42	26°♈54'04		direct		-4627 May 29 j 23:27	24°♈24'31	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4627 Jun 28 j 19:51	0°♎				-4622 Oct 11 j 19:13	0°♐		
	-4627 Aug 25 j 11:16	0°♌		morning rise		-4622 Oct 13 j 15:02	1°♐21'38		
	-4627 Oct 10 j 01:04	0°♏				-4622 Nov 20 j 10:46	0°♎		
	-4627 Nov 23 j 03:21	0°♐		desc. node		-4622 Dec 14 j 22:56	18°♎53'06		
	-4626 Jan 06 j 17:20	0°♏				-4622 Dec 29 j 07:25	0°♌		
	-4626 Feb 21 j 09:39	0°♏				-4621 Feb 06 j 04:53	0°♏		
asc. node	-4626 Mar 10 j 11:20	11°♏01'48				-4621 Mar 18 j 02:24	0°♐		
	-4626 Apr 09 j 01:58	0°♐				-4621 Apr 29 j 06:41	0°♏		
evening set	-4626 Apr 18 j 18:40	6°♐10'57				-4621 Jun 15 j 04:24	0°♏		
	-4626 May 26 j 04:29	0°♏				-4621 Aug 21 j 13:31	0°♐		
max. Earth dist.	-4626 May 31 j 22:27	3°♏39'52	2.66999 AU	retrograde		-4621 Sep 09 j 18:39	2°♐16'47		
						-4621 Sep 27 j 20:12	30°♏		
conjunction	-4626 Jun 05 j 05:19	6°♏23'59	0°45'00	min. Earth dist.		-4621 Oct 16 j 02:26	23°♏45'45	0.63401 AU	
minimum elong	-4626 Jun 05 j 04:03	6°♏21'56	0°45'06	opposition		-4621 Oct 19 j 16:43	22°♏18'59	0°-28'-1	
	-4626 Jul 11 j 23:47	0°♐		greatest brilliancy		-4621 Oct 19 j 14:40	22°♏21'03	-1.5m	
morning rise	-4626 Jul 20 j 15:13	5°♐35'43		asc. node		-4621 Oct 31 j 11:37	17°♏52'13		
	-4626 Aug 26 j 22:22	0°♐		direct		-4621 Nov 27 j 05:21	13°♏11'29		
	-4626 Oct 10 j 19:35	0°♏				-4620 Jan 27 j 21:06	0°♐		
	-4626 Nov 23 j 18:53	0°♐				-4620 Mar 25 j 16:31	0°♏		
	-4625 Jan 06 j 05:59	0°♎				-4620 May 14 j 15:21	0°♐		
	-4625 Feb 19 j 04:21	0°♌				-4620 Jun 29 j 16:27	0°♐		
desc. node	-4625 Mar 12 j 00:09	13°♌40'04				-4620 Aug 11 j 18:03	0°♏		
	-4625 Apr 07 j 20:23	0°♏		evening set		-4620 Aug 18 j 17:08	5°♏01'15		
retrograde	-4625 Jun 11 j 21:38	22°♏33'47		max. Earth dist.		-4620 Sep 05 j 17:18	18°♏12'59	2.42834 AU	
min. Earth dist.	-4625 Jul 08 j 15:43	17°♏55'54	0.41559 AU			-4620 Sep 21 j 11:41	0°♐		
greatest brilliancy	-4625 Jul 13 j 21:47	16°♏18'14	-2.6m						
opposition	-4625 Jul 15 j 22:05	15°♏40'31	-6°-25'-1	conjunction		-4620 Oct 13 j 13:39	16°♐49'12	0°13'03	
direct	-4625 Aug 15 j 20:15	9°♏55'21		minimum elong		-4620 Oct 13 j 14:36	16°♐51'01	0°13'06	
	-4625 Oct 19 j 18:48	0°♐		behind sun begin		-4620 Oct 12 j 23:21	16°♐21'42		
	-4625 Dec 12 j 13:52	0°♏		behind sun end		-4620 Oct 14 j 05:52	17°♐20'21		
asc. node	-4624 Jan 26 j 10:13	27°♏06'24				-4620 Oct 30 j 14:43	0°♎		
	-4624 Jan 31 j 03:32	0°♏		desc. node		-4620 Oct 31 j 18:56	0°♎54'53		
	-4624 Mar 19 j 18:47	0°♐				-4620 Dec 07 j 22:48	0°♌		
	-4624 May 06 j 18:46	0°♏		morning rise		-4620 Dec 15 j 17:52	6°♌06'46		
evening set	-4624 May 26 j 08:33	12°♏24'33				-4619 Jan 15 j 08:54	0°♏		
	-4624 Jun 22 j 17:06	0°♐				-4619 Feb 23 j 17:52	0°♐		
max. Earth dist.	-4624 Jun 24 j 07:09	1°♐01'48	2.63489 AU			-4619 Apr 05 j 22:19	0°♏		
						-4619 May 19 j 21:01	0°♏		
conjunction	-4624 Jul 12 j 03:18	12°♐42'11	1°09'13			-4619 Jul 07 j 07:02	0°♐		
minimum elong	-4624 Jul 12 j 02:38	12°♐41'06	1°09'27			-4619 Sep 07 j 05:34	0°♏		
	-4624 Aug 07 j 02:12	0°♐		asc. node		-4619 Sep 17 j 13:08	3°♏13'24		
morning rise	-4624 Aug 27 j 10:29	13°♐50'31		retrograde		-4619 Oct 13 j 17:30	7°♏04'49		
	-4624 Sep 19 j 17:13	0°♏				-4619 Nov 16 j 00:21	30°♏		
	-4624 Oct 31 j 17:13	0°♐		opposition		-4619 Nov 22 j 13:14	27°♐24'45	2°21'47	
	-4624 Dec 11 j 10:51	0°♎		greatest brilliancy		-4619 Nov 22 j 12:07	27°♐25'53	-1.3m	
	-4623 Jan 20 j 11:52	0°♌		min. Earth dist.		-4619 Nov 22 j 16:21	27°♐21'37	0.67097 AU	
desc. node	-4623 Jan 27 j 00:26	4°♌53'38		direct		-4618 Jan 02 j 01:24	17°♐36'09		
	-4623 Mar 01 j 17:46	0°♏				-4618 Feb 22 j 09:16	0°♏		
	-4623 Apr 12 j 17:43	0°♐				-4618 Apr 22 j 04:56	0°♐		
	-4623 May 30 j 12:58	0°♏				-4618 Jun 09 j 11:21	0°♐		
retrograde	-4623 Aug 01 j 17:21	20°♏55'13				-4618 Jul 23 j 04:27	0°♏		
min. Earth dist.	-4623 Sep 02 j 05:14	14°♏09'40	0.53913 AU			-4618 Sep 01 j 23:40	0°♐		
greatest brilliancy	-4623 Sep 07 j 22:35	11°♏58'20	-1.9m	desc. node		-4618 Sep 18 j 16:23	12°♐43'31		
opposition	-4623 Sep 09 j 05:12	11°♏28'56	-3°-56'-2			-4618 Oct 10 j 23:11	0°♎		
direct	-4623 Oct 14 j 11:32	3°♏37'33		evening set		-4618 Oct 16 j 12:53	4°♎21'31		
asc. node	-4623 Dec 13 j 10:32	20°♏12'33				-4618 Nov 18 j 03:00	0°♌		
	-4622 Jan 02 j 17:02	0°♏							
	-4622 Feb 26 j 06:16	0°♐		conjunction		-4618 Dec 20 j 11:56	25°♌23'36	0°-57'-15	
	-4622 Apr 17 j 11:24	0°♏		minimum elong		-4618 Dec 20 j 08:53	25°♌17'40	0°57'26	
	-4622 Jun 04 j 04:44	0°♐				-4618 Dec 26 j 10:11	0°♏		
evening set	-4622 Jul 04 j 22:56	20°♐09'45				-4617 Feb 03 j 17:36	0°♐		
	-4622 Jul 19 j 13:56	0°♐		max. Earth dist.		-4617 Feb 05 j 15:07	1°♐25'07	2.40845 AU	
max. Earth dist.	-4622 Jul 23 j 07:26	2°♐32'07	2.54937 AU	morning rise		-4617 Feb 25 j 00:19	15°♐44'24		
						-4617 Mar 16 j 18:38	0°♏		
conjunction	-4622 Aug 23 j 00:11	23°♐50'18	1°03'19			-4617 Apr 29 j 02:18	0°♏		
minimum elong	-4622 Aug 23 j 01:34	23°♐52'44	1°03'32			-4617 Jun 14 j 03:24	0°♐		
	-4622 Aug 31 j 16:25	0°♏				-4617 Aug 03 j 00:02	0°♏		

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 29

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

asc. node	-4617 Aug 05 j 13:25	1°♄26'58		-4612 Oct 21 j 03:12	0°♂	
	-4617 Oct 02 j 00:58	0°♂		-4612 Dec 02 j 10:06	0°♂	
retrograde	-4617 Nov 18 j 17:25	11°♂00'05		-4611 Jan 14 j 21:05	0°♂	
opposition	-4617 Dec 27 j 09:12	2°♂02'11	4°25'26	-4611 Feb 28 j 20:03	0°♂	
greatest brilliancy	-4617 Dec 28 j 02:08	1°♂45'34	-1.4m	asc. node	-4611 Mar 27 j 04:43	17°♂10'57
min. Earth dist.	-4617 Dec 31 j 07:17	0°♂29'55	0.64485 AU	evening set	-4611 Apr 03 j 01:52	21°♂37'51
	-4616 Jan 01 j 14:03	30°♂		-4611 Apr 16 j 01:53	0°♂	
direct	-4616 Feb 06 j 12:41	22°♂01'27				
	-4616 Mar 16 j 12:46	0°♂		conjunction	-4611 May 21 j 11:41	22°♂38'53 0°30'09
	-4616 May 15 j 09:14	0°♂		minimum elong	-4611 May 21 j 10:39	22°♂37'15 0°30'13
	-4616 Jun 30 j 16:00	0°♂		max. Earth dist.	-4611 May 22 j 20:44	23°♂31'36 2.66906 AU
desc. node	-4616 Aug 05 j 15:06	25°♂45'44			-4611 Jun 02 j 00:15	0°♂
	-4616 Aug 11 j 08:06	0°♂		morning rise	-4611 Jul 06 j 09:45	21°♂58'31
	-4616 Sep 19 j 16:00	0°♂			-4611 Jul 18 j 22:02	0°♂
	-4616 Oct 28 j 00:49	0°♂			-4611 Sep 03 j 07:08	0°♂
	-4616 Dec 05 j 13:12	0°♂			-4611 Oct 19 j 01:35	0°♂
evening set	-4616 Dec 22 j 23:28	13°♂20'52			-4611 Dec 03 j 13:01	0°♂
	-4615 Jan 14 j 02:53	0°♂			-4610 Jan 18 j 14:18	0°♂
					-4610 Mar 09 j 04:52	0°♂
conjunction	-4615 Feb 21 j 23:39	28°♂16'31 0°-59'-36		desc. node	-4610 Mar 28 j 17:21	10°♂01'20
minimum elong	-4615 Feb 22 j 01:38	28°♂20'04 0°59'49		retrograde	-4610 May 16 j 02:51	23°♂06'56
	-4615 Feb 24 j 09:56	0°♂		min. Earth dist.	-4610 Jun 12 j 19:44	18°♂35'54 0.38349 AU
max. Earth dist.	-4615 Mar 30 j 06:28	23°♂32'27 2.53657 AU		opposition	-4610 Jun 16 j 15:50	17°♂32'05 -5°-21'-33
	-4615 Apr 08 j 19:00	0°♂		greatest brilliancy	-4610 Jun 15 j 16:02	17°♂48'38 -2.8m
morning rise	-4615 Apr 19 j 10:23	7°♂08'35		direct	-4610 Jul 16 j 14:46	12°♂27'28
	-4615 May 24 j 06:40	0°♂			-4610 Sep 13 j 03:53	0°♂
asc. node	-4615 Jun 22 j 11:05	18°♂34'37			-4610 Nov 04 j 23:03	0°♂
	-4615 Jul 10 j 19:19	0°♂			-4610 Dec 23 j 00:24	0°♂
	-4615 Aug 29 j 21:00	0°♂			-4609 Feb 08 j 12:14	0°♂
	-4615 Oct 25 j 04:08	0°♂		asc. node	-4609 Feb 12 j 01:51	2°♂15'00
retrograde	-4615 Dec 30 j 07:50	19°♂00'01			-4609 Mar 28 j 04:04	0°♂
opposition	-4614 Feb 04 j 14:24	11°♂12'15 5°15'36		evening set	-4609 May 12 j 11:00	28°♂33'42
greatest brilliancy	-4614 Feb 06 j 09:24	10°♂32'31 -1.8m			-4609 May 14 j 17:26	0°♂
min. Earth dist.	-4614 Feb 12 j 00:38	8°♂28'18 0.55642 AU		max. Earth dist.	-4609 Jun 15 j 12:02	20°♂16'58 2.65485 AU
direct	-4614 Mar 16 j 10:43	1°♂47'56				
	-4614 Jun 02 j 06:36	0°♂		conjunction	-4609 Jun 28 j 05:00	28°♂28'57 1°02'39
desc. node	-4614 Jun 23 j 14:23	13°♂17'47		minimum elong	-4609 Jun 28 j 03:53	28°♂27'09 1°02'49
	-4614 Jul 18 j 03:40	0°♂			-4609 Jun 30 j 13:11	0°♂
	-4614 Aug 28 j 03:27	0°♂		morning rise	-4609 Aug 12 j 18:26	28°♂27'06
	-4614 Oct 06 j 11:53	0°♂			-4609 Aug 15 j 01:57	0°♂
	-4614 Nov 14 j 19:18	0°♂			-4609 Sep 28 j 02:21	0°♂
	-4614 Dec 25 j 02:38	0°♂			-4609 Nov 09 j 16:26	0°♂
	-4613 Feb 05 j 01:37	0°♂			-4609 Dec 21 j 04:10	0°♂
evening set	-4613 Feb 18 j 03:08	9°♂04'09			-4608 Jan 31 j 03:00	0°♂
	-4613 Mar 20 j 22:33	0°♂		desc. node	-4608 Feb 13 j 17:24	9°♂55'42
					-4608 Mar 12 j 15:14	0°♂
conjunction	-4613 Apr 12 j 01:29	14°♂40'37 0°-16'-6			-4608 Apr 26 j 06:53	0°♂
minimum elong	-4613 Apr 12 j 02:12	14°♂41'48 0°16'11			-4608 Jul 01 j 22:28	0°♂
max. Earth dist.	-4613 Apr 29 j 00:34	25°♂46'00 2.62906 AU		retrograde	-4608 Jul 14 j 18:58	1°♂08'58
	-4613 May 05 j 13:11	0°♂			-4608 Jul 27 j 05:35	30°♂
asc. node	-4613 May 10 j 08:04	3°♂05'39		min. Earth dist.	-4608 Aug 13 j 01:42	25°♂16'11 0.49026 AU
morning rise	-4613 May 31 j 08:13	16°♂35'05		greatest brilliancy	-4608 Aug 19 j 03:17	23°♂04'36 -2.1m
	-4613 Jun 21 j 10:15	0°♂		opposition	-4608 Aug 20 j 23:38	22°♂24'10 -5°-16'-46
	-4613 Aug 08 j 02:59	0°♂		direct	-4608 Sep 23 j 15:51	15°♂16'46
	-4613 Sep 25 j 16:53	0°♂			-4608 Nov 17 j 16:23	0°♂
	-4613 Nov 15 j 13:06	0°♂		asc. node	-4608 Dec 30 j 01:25	21°♂23'41
	-4612 Jan 15 j 06:06	0°♂			-4607 Jan 14 j 12:11	0°♂
retrograde	-4612 Feb 27 j 06:50	9°♂23'58			-4607 Mar 06 j 18:50	0°♂
opposition	-4612 Mar 30 j 13:13	3°♂30'28 2°40'22			-4607 Apr 24 j 21:28	0°♂
greatest brilliancy	-4612 Mar 31 j 18:08	3°♂08'15 -2.5m			-4607 Jun 11 j 05:21	0°♂
min. Earth dist.	-4612 Apr 07 j 03:55	1°♂10'36 0.42885 AU		evening set	-4607 Jun 19 j 03:10	5°♂08'15
	-4612 Apr 11 j 05:51	30°♂		max. Earth dist.	-4607 Jul 11 j 02:25	19°♂36'55 2.58834 AU
direct	-4612 May 04 j 13:07	26°♂29'53			-4607 Jul 26 j 13:20	0°♂
desc. node	-4612 May 10 j 15:10	26°♂45'07				
	-4612 May 27 j 16:10	0°♂		conjunction	-4607 Aug 05 j 20:47	7°♂01'19 1°10'09
	-4612 Jul 26 j 17:28	0°♂		minimum elong	-4607 Aug 05 j 21:18	7°♂02'13 1°10'23
	-4612 Sep 09 j 01:03	0°♂			-4607 Sep 07 j 19:36	0°♂

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 30

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

morning rise	-4607 Sep 23 j 17:02	11°♂22'28		min. Earth dist.	-4602 Dec 15 j 23:59	17°♂34'22	0.66264 AU
	-4607 Oct 19 j 05:03	0°♍		direct	-4601 Jan 23 j 15:22	8°♂32'24	
	-4607 Nov 28 j 04:45	0°♊			-4601 Apr 03 j 21:42	0°♈	
desc. node	-4607 Dec 31 j 16:29	25°♊36'34			-4601 May 26 j 07:10	0°♎	
	-4606 Jan 06 j 09:43	0°♌			-4601 Jul 10 j 04:24	0°♍	
	-4606 Feb 14 j 15:38	0°♌			-4601 Aug 20 j 09:16	0°♍	
	-4606 Mar 27 j 00:28	0°♌		desc. node	-4601 Aug 23 j 07:52	2°♍12'46	
	-4606 May 09 j 04:56	0°♍			-4601 Sep 28 j 12:24	0°♊	
	-4606 Jun 28 j 21:12	0°♋		greatest brilliancy	-4601 Oct 05 j 22:40	5°♊48'00	1.2m
retrograde	-4606 Aug 26 j 10:20	17°♋33'52			-4601 Nov 05 j 18:08	0°♌	
min. Earth dist.	-4606 Sep 30 j 00:33	9°♋39'26	0.60316 AU	evening set	-4601 Nov 27 j 15:42	17°♌10'34	
opposition	-4606 Oct 05 j 00:51	7°♋39'40	-1°-45'-12		-4601 Dec 14 j 03:20	0°♌	
greatest brilliancy	-4606 Oct 04 j 14:28	7°♋50'00	-1.6m		-4600 Jan 22 j 13:25	0°♌	
	-4606 Oct 29 j 20:50	30°♌					
direct	-4606 Nov 11 j 10:36	28°♌56'58		conjunction	-4600 Jan 30 j 18:14	6°♌05'41	-1°-7'-46
asc. node	-4606 Nov 17 j 02:19	29°♌08'49		minimum elong	-4600 Jan 30 j 18:55	6°♌06'58	1°08'00
	-4606 Nov 24 j 18:02	0°♋			-4600 Mar 03 j 16:45	0°♌	
	-4605 Feb 09 j 21:23	0°♌		max. Earth dist.	-4600 Mar 14 j 19:07	7°♌50'35	2.48817 AU
	-4605 Apr 04 j 08:42	0°♌		morning rise	-4600 Mar 31 j 05:26	19°♌15'47	
	-4605 May 23 j 04:38	0°♈			-4600 Apr 15 j 23:25	0°♋	
	-4605 Jul 07 j 21:42	0°♎			-4600 May 31 j 13:08	0°♌	
evening set	-4605 Jul 31 j 16:57	16°♎22'34		asc. node	-4600 Jul 09 j 03:42	24°♌13'29	
max. Earth dist.	-4605 Aug 16 j 01:05	27°♎12'19	2.47775 AU		-4600 Jul 18 j 15:23	0°♋	
	-4605 Aug 19 j 22:53	0°♍			-4600 Sep 08 j 16:59	0°♈	
					-4600 Nov 17 j 02:07	0°♎	
conjunction	-4605 Sep 22 j 05:12	24°♍19'25	0°38'23	retrograde	-4600 Dec 12 j 12:08	3°♎31'21	
minimum elong	-4605 Sep 22 j 07:10	24°♍23'05	0°38'30		-4599 Jan 04 j 23:41	30°♌	
	-4605 Sep 29 j 19:19	0°♍		opposition	-4599 Jan 18 j 21:10	25°♌11'41	5°09'06
	-4605 Nov 08 j 02:19	0°♊		greatest brilliancy	-4599 Jan 20 j 06:30	24°♌39'56	-1.6m
desc. node	-4605 Nov 18 j 14:37	8°♊09'36		min. Earth dist.	-4599 Jan 25 j 00:52	22°♌51'15	0.59792 AU
morning rise	-4605 Nov 19 j 08:16	8°♊43'55		direct	-4599 Feb 28 j 12:59	15°♌24'26	
	-4605 Dec 16 j 14:05	0°♌			-4599 Apr 23 j 05:00	0°♎	
	-4604 Jan 24 j 02:58	0°♌			-4599 Jun 14 j 17:54	0°♍	
	-4604 Mar 03 j 14:31	0°♌		desc. node	-4599 Jul 10 j 07:13	17°♍17'00	
	-4604 Apr 13 j 23:46	0°♍			-4599 Jul 28 j 02:21	0°♍	
	-4604 May 28 j 13:21	0°♋			-4599 Sep 06 j 03:42	0°♊	
	-4604 Jul 18 j 09:23	0°♌			-4599 Oct 14 j 23:13	0°♌	
retrograde	-4604 Sep 30 j 07:20	24°♌06'45			-4599 Nov 22 j 20:27	0°♌	
asc. node	-4604 Oct 04 j 03:06	24°♌00'55			-4598 Jan 01 j 18:43	0°♌	
min. Earth dist.	-4604 Nov 07 j 23:05	14°♌48'48	0.66394 AU	evening set	-4598 Jan 28 j 17:33	19°♌34'58	
opposition	-4604 Nov 09 j 07:22	14°♌16'17	1°21'13		-4598 Feb 12 j 09:39	0°♌	
greatest brilliancy	-4604 Nov 09 j 04:17	14°♌19'23	-1.3m				
direct	-4604 Dec 19 j 04:44	4°♌40'29		conjunction	-4598 Mar 25 j 09:47	28°♌14'42	0°-34'-47
	-4603 Mar 08 j 16:03	0°♋		minimum elong	-4598 Mar 25 j 11:21	28°♌17'21	0°34'55
	-4603 May 01 j 05:16	0°♈			-4598 Mar 28 j 00:20	0°♋	
	-4603 Jun 17 j 08:05	0°♎		max. Earth dist.	-4598 Apr 18 j 10:35	14°♋16'26	2.59887 AU
	-4603 Jul 30 j 17:15	0°♍			-4598 May 12 j 12:02	0°♌	
	-4603 Sep 09 j 11:00	0°♍		morning rise	-4598 May 15 j 22:43	2°♌13'43	
evening set	-4603 Sep 21 j 15:04	9°♍14'52		asc. node	-4598 May 27 j 00:36	9°♌21'35	
desc. node	-4603 Oct 05 j 10:52	19°♍53'06			-4598 Jun 28 j 12:20	0°♋	
	-4603 Oct 18 j 11:19	0°♊			-4598 Aug 15 j 19:58	0°♈	
					-4598 Oct 05 j 03:27	0°♎	
conjunction	-4603 Nov 22 j 16:11	27°♊38'25	0°-33'-41		-4598 Nov 30 j 16:43	0°♍	
minimum elong	-4603 Nov 22 j 13:27	27°♊33'01	0°33'45	retrograde	-4597 Feb 01 j 09:14	17°♍37'20	
	-4603 Nov 25 j 16:06	0°♌		opposition	-4597 Mar 07 j 11:33	10°♍53'51	4°22'53
max. Earth dist.	-4603 Nov 26 j 12:18	0°♌39'46	2.37649 AU	greatest brilliancy	-4597 Mar 09 j 09:31	10°♍15'01	-2.2m
	-4602 Jan 02 j 23:24	0°♌		min. Earth dist.	-4597 Mar 16 j 00:12	8°♍02'16	0.47927 AU
morning rise	-4602 Jan 29 j 12:44	20°♌24'04		direct	-4597 Apr 13 j 22:44	2°♍40'31	
	-4602 Feb 11 j 06:07	0°♌		desc. node	-4597 May 28 j 07:44	14°♍05'07	
	-4602 Mar 24 j 06:29	0°♍			-4597 Jun 26 j 22:03	0°♍	
	-4602 May 06 j 16:22	0°♋			-4597 Aug 11 j 01:17	0°♊	
	-4602 Jun 22 j 06:05	0°♌			-4597 Sep 21 j 05:57	0°♌	
	-4602 Aug 13 j 05:29	0°♋			-4597 Oct 31 j 17:54	0°♌	
asc. node	-4602 Aug 22 j 03:42	4°♋36'10			-4597 Dec 11 j 23:19	0°♌	
retrograde	-4602 Nov 04 j 07:50	27°♋49'31			-4596 Jan 23 j 15:56	0°♌	
opposition	-4602 Dec 13 j 13:38	18°♋32'18	3°43'49		-4596 Mar 08 j 02:00	0°♋	
greatest brilliancy	-4602 Dec 13 j 21:40	18°♋24'19	-1.3m	evening set	-4596 Mar 17 j 14:17	6°♋17'09	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

asc. node	-4596 Apr 12 j 20:37	23° Υ 26'20					-4591 Jan 14 j 22:20	0° \mathbb{M}		
	-4596 Apr 23 j 00:05	0° Υ			desc. node		-4591 Jan 17 j 11:07	1° \mathbb{M} 55'13		
							-4591 Feb 23 j 17:18	0° \mathcal{A}		
conjunction	-4596 May 06 j 09:05	8° Υ 36'18	0°13'15				-4591 Apr 05 j 21:47	0° \mathcal{B}		
minimum elong	-4596 May 06 j 08:34	8° Υ 35'28	0°13'16				-4591 May 21 j 03:37	0° \approx		
behind sun begin	-4596 May 05 j 21:37	8° Υ 17'55					-4591 Jul 27 j 12:32	0° \mathcal{H}		
behind sun end	-4596 May 06 j 19:30	8° Υ 53'01			retrograde		-4591 Aug 11 j 02:30	1° \mathcal{H} 25'33		
max. Earth dist.	-4596 May 13 j 12:05	13° Υ 10'26	2.66004 AU				-4591 Aug 25 j 02:11	30° $\mathcal{R}\approx$		
	-4596 Jun 08 j 20:25	0° \mathcal{B}			min. Earth dist.		-4591 Sep 12 j 17:57	24° \approx 13'56	0.56367 AU	
morning rise	-4596 Jun 22 j 05:34	8° \mathcal{B} 31'24			greatest brilliancy		-4591 Sep 18 j 03:43	22° \approx 07'24	-1.8m	
	-4596 Jul 25 j 23:05	0° \mathbb{I}			opposition		-4591 Sep 19 j 02:24	21° \approx 45'16	-3°-7'-38	
	-4596 Sep 10 j 23:04	0° \mathcal{E}			direct		-4591 Oct 25 j 04:06	13° \approx 33'41		
	-4596 Oct 28 j 00:09	0° \mathcal{Q}			asc. node		-4591 Dec 03 j 15:53	21° \approx 37'40		
	-4596 Dec 15 j 00:02	0° \mathcal{M}					-4591 Dec 24 j 04:30	0° \mathcal{H}		
	-4595 Feb 05 j 03:23	0° \mathcal{L}					-4590 Feb 20 j 04:55	0° Υ		
desc. node	-4595 Apr 14 j 08:37	22° \mathcal{L} 16'40					-4590 Apr 12 j 08:49	0° \mathcal{B}		
retrograde	-4595 Apr 15 j 05:15	22° \mathcal{L} 16'57					-4590 May 30 j 10:54	0° \mathbb{I}		
opposition	-4595 May 15 j 16:22	17° \mathcal{L} 14'04	-2°-21'-9		evening set		-4590 Jul 14 j 08:45	29° \mathbb{I} 35'49		
greatest brilliancy	-4595 May 15 j 19:02	17° \mathcal{L} 12'18	-2.9m				-4590 Jul 14 j 23:02	0° \mathcal{E}		
min. Earth dist.	-4595 May 17 j 03:43	16° \mathcal{L} 50'32	0.37930 AU		max. Earth dist.		-4590 Jul 31 j 02:34	11° \mathcal{E} 03'10	2.52514 AU	
direct	-4595 Jun 15 j 06:53	12° \mathcal{L} 02'07					-4590 Aug 27 j 01:24	0° \mathcal{Q}		
	-4595 Aug 12 j 09:57	0° \mathbb{M}								
	-4595 Oct 01 j 21:27	0° \mathcal{A}			conjunction		-4590 Sep 02 j 10:05	4° \mathcal{Q} 33'46	0°56'20	
	-4595 Nov 16 j 17:23	0° \mathcal{B}			minimum elong		-4590 Sep 02 j 11:51	4° \mathcal{Q} 36'57	0°56'31	
	-4594 Jan 01 j 04:47	0° \approx					-4590 Oct 07 j 02:05	0° \mathcal{M}		
	-4594 Feb 16 j 09:17	0° \mathcal{H}			morning rise		-4590 Oct 26 j 01:06	14° \mathcal{M} 16'44		
asc. node	-4594 Feb 28 j 17:40	7° \mathcal{H} 55'48					-4590 Nov 15 j 14:35	0° \mathcal{L}		
	-4594 Apr 04 j 08:19	0° Υ			desc. node		-4590 Dec 05 j 08:17	15° \mathcal{L} 15'13		
evening set	-4594 Apr 27 j 11:45	14° Υ 41'29					-4590 Dec 24 j 07:54	0° \mathbb{M}		
	-4594 May 21 j 14:04	0° \mathcal{B}					-4589 Feb 01 j 01:39	0° \mathcal{A}		
max. Earth dist.	-4594 Jun 06 j 07:12	10° \mathcal{B} 01'11	2.66698 AU				-4589 Mar 12 j 18:22	0° \mathcal{B}		
							-4589 Apr 23 j 13:01	0° \approx		
conjunction	-4594 Jun 13 j 13:36	14° \mathcal{B} 40'06	0°52'22				-4589 Jun 08 j 05:51	0° \mathcal{H}		
minimum elong	-4594 Jun 13 j 12:18	14° \mathcal{B} 38'01	0°52'30				-4589 Aug 03 j 18:21	0° Υ		
	-4594 Jul 07 j 09:17	0° \mathbb{I}			retrograde		-4589 Sep 17 j 17:36	10° Υ 41'56		
morning rise	-4594 Jul 28 j 21:21	13° \mathbb{I} 59'30			asc. node		-4589 Oct 21 j 17:49	3° Υ 09'20		

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 32

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

greatest brilliancy	-4587 Nov 30 j 05:52	5°♄20'46	-1.3m	conjunction	-4581 Apr 21 j 13:41	23°♄55'57	0°-5'-9
min. Earth dist.	-4587 Dec 01 j 02:56	4°♄59'40	0.67067 AU	minimum elong	-4581 Apr 21 j 13:54	23°♄56'19	0°05'12
	-4587 Dec 14 j 11:06	30°♄♂		behind sun begin	-4581 Apr 20 j 18:12	23°♄24'17	
direct	-4586 Jan 09 j 23:04	25°♂28'28		behind sun end	-4581 Apr 22 j 09:36	24°♄28'20	
	-4586 Feb 08 j 00:03	0°♄		asc. node	-4581 Apr 30 j 13:17	29°♄45'46	
	-4586 Apr 15 j 16:59	0°♂			-4581 Apr 30 j 22:05	0°♂	
	-4586 Jun 04 j 02:41	0°♄		max. Earth dist.	-4581 May 04 j 19:35	2°♂31'09	2.64252 AU
	-4586 Jul 18 j 05:04	0°♄		morning rise	-4581 Jun 08 j 19:47	24°♂57'31	
	-4586 Aug 28 j 03:49	0°♄			-4581 Jun 16 j 18:00	0°♄	
desc. node	-4586 Sep 09 j 02:20	9°♄03'25			-4581 Aug 03 j 04:23	0°♂	
	-4586 Oct 06 j 04:43	0°♄			-4581 Sep 20 j 01:51	0°♄	
evening set	-4586 Oct 31 j 11:11	19°♄49'48			-4581 Nov 08 j 03:34	0°♄	
	-4586 Nov 13 j 09:03	0°♄			-4581 Dec 31 j 10:46	0°♄	
	-4586 Dec 21 j 16:19	0°♄		retrograde	-4580 Mar 14 j 14:05	23°♄51'23	
conjunction	-4585 Jan 04 j 21:56	10°♄59'00	-1°-4'-56	opposition	-4580 Apr 14 j 23:20	18°♄23'16	1°08'29
minimum elong	-4585 Jan 04 j 20:04	10°♄55'26	1°05'10	greatest brilliancy	-4580 Apr 15 j 10:32	18°♄15'07	-2.7m
	-4585 Jan 29 j 23:43	0°♄		min. Earth dist.	-4580 Apr 21 j 01:29	16°♄37'17	0.40532 AU
max. Earth dist.	-4585 Feb 22 j 15:42	17°♄29'06	2.43607 AU	desc. node	-4580 May 01 j 02:41	14°♄03'42	
morning rise	-4585 Mar 10 j 13:21	28°♄57'27		direct	-4580 May 18 j 08:00	12°♄06'45	
	-4585 Mar 12 j 00:24	0°♄			-4580 Jul 14 j 04:28	0°♄	
	-4585 Apr 24 j 06:07	0°♄			-4580 Aug 31 j 21:12	0°♄	
	-4585 Jun 09 j 01:02	0°♂			-4580 Oct 14 j 12:44	0°♄	
asc. node	-4585 Jul 26 j 18:58	29°♂15'36			-4580 Nov 26 j 15:48	0°♄	
	-4585 Jul 28 j 01:16	0°♄			-4579 Jan 09 j 15:33	0°♄	
	-4585 Sep 21 j 19:26	0°♂			-4579 Feb 23 j 22:36	0°♄	
retrograde	-4585 Nov 27 j 09:35	19°♂14'44		asc. node	-4579 Mar 17 j 09:05	13°♄55'13	
opposition	-4584 Jan 04 j 15:45	10°♂29'06	4°45'01		-4579 Apr 11 j 09:22	0°♂	
greatest brilliancy	-4584 Jan 05 j 14:22	10°♂07'06	-1.4m	evening set	-4579 Apr 12 j 04:01	0°♂29'51	
min. Earth dist.	-4584 Jan 09 j 09:12	8°♂38'50	0.63063 AU	max. Earth dist.	-4579 May 28 j 05:51	29°♂53'42	2.67072 AU
direct	-4584 Feb 14 j 17:07	0°♂30'55			-4579 May 28 j 09:48	0°♄	
	-4584 May 08 j 02:35	0°♄		conjunction	-4579 May 29 j 23:35	1°♄00'14	0°39'04
	-4584 Jun 24 j 20:38	0°♄		minimum elong	-4579 May 29 j 22:23	0°♄58'19	0°39'10
desc. node	-4584 Jul 27 j 00:01	22°♄38'58		morning rise	-4579 Jul 14 j 13:17	0°♂11'23	
	-4584 Aug 06 j 00:16	0°♄			-4579 Jul 14 j 06:13	0°♂	
	-4584 Sep 14 j 13:27	0°♄			-4579 Aug 29 j 09:39	0°♄	
	-4584 Oct 23 j 01:32	0°♄			-4579 Oct 13 j 15:59	0°♄	
	-4584 Nov 30 j 16:19	0°♄			-4579 Nov 27 j 05:47	0°♄	
evening set	-4583 Jan 05 j 23:03	27°♄29'18			-4578 Jan 10 j 15:45	0°♄	
	-4583 Jan 09 j 08:10	0°♄			-4578 Feb 25 j 07:09	0°♄	
	-4583 Feb 19 j 17:00	0°♄		desc. node	-4578 Mar 19 j 03:45	13°♄22'34	
conjunction	-4583 Mar 05 j 23:31	10°♄01'29	0°-51'-42		-4578 Apr 19 j 20:24	0°♄	
minimum elong	-4583 Mar 06 j 01:37	10°♄05'07	0°51'54	retrograde	-4578 May 31 j 18:18	10°♄29'32	
	-4583 Apr 04 j 02:49	0°♄		min. Earth dist.	-4578 Jun 27 j 13:06	6°♄01'32	0.39851 AU
max. Earth dist.	-4583 Apr 06 j 19:47	1°♄49'28	2.56073 AU	greatest brilliancy	-4578 Jul 01 j 23:05	4°♄43'45	-2.7m
morning rise	-4583 Apr 29 j 11:11	16°♄53'41		opposition	-4578 Jul 03 j 15:12	4°♄14'07	-6°-12'-35
	-4583 May 19 j 13:14	0°♂			-4578 Jul 20 j 17:47	30°♄♂	
asc. node	-4583 Jun 12 j 17:18	15°♂28'50		direct	-4578 Aug 02 j 22:05	28°♄50'43	
	-4583 Jul 05 j 19:39	0°♄			-4578 Aug 16 j 10:14	0°♄	
	-4583 Aug 24 j 01:58	0°♂			-4578 Oct 26 j 22:43	0°♄	
	-4583 Oct 16 j 08:51	0°♄			-4578 Dec 16 j 13:56	0°♄	
retrograde	-4582 Jan 10 j 09:34	28°♄57'54		asc. node	-4577 Feb 02 j 07:32	29°♄30'51	
opposition	-4582 Feb 14 j 23:47	21°♄30'40	5°07'17		-4577 Feb 03 j 02:18	0°♄	
greatest brilliancy	-4582 Feb 16 j 22:25	20°♄48'39	-1.9m		-4577 Mar 23 j 06:07	0°♂	
min. Earth dist.	-4582 Feb 23 j 00:23	18°♄38'12	0.53024 AU	evening set	-4577 May 10 j 01:22	0°♄	
direct	-4582 Mar 26 j 04:19	12°♄25'52		max. Earth dist.	-4577 May 21 j 00:13	6°♄56'27	
	-4582 May 23 j 02:04	0°♄			-4577 Jun 21 j 03:22	26°♄52'49	2.64489 AU
desc. node	-4582 Jun 14 j 00:40	12°♄25'34			-4577 Jun 25 j 23:01	0°♂	
	-4582 Jul 11 j 04:04	0°♄		conjunction	-4577 Jul 06 j 17:14	7°♂00'10	1°06'57
	-4582 Aug 22 j 01:59	0°♄		minimum elong	-4577 Jul 06 j 16:22	6°♂58'44	1°07'08
	-4582 Sep 30 j 21:36	0°♄			-4577 Aug 10 j 10:34	0°♄	
	-4582 Nov 09 j 12:24	0°♄		morning rise	-4577 Aug 21 j 14:30	7°♄32'05	
	-4582 Dec 20 j 01:34	0°♄			-4577 Sep 23 j 06:28	0°♄	
	-4581 Jan 31 j 05:21	0°♄			-4577 Nov 04 j 13:06	0°♄	
evening set	-4581 Feb 28 j 22:17	19°♄42'21			-4577 Dec 15 j 14:34	0°♄	
	-4581 Mar 16 j 05:42	0°♄			-4576 Jan 25 j 00:21	0°♄	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 33

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

desc. node	-4576 Feb 04 j 03:56	7°♌32'31		-4571 Apr 25 j 11:06	0°♐	
	-4576 Mar 05 j 16:43	0°♌		-4571 Jun 12 j 06:28	0°♍	
	-4576 Apr 17 j 12:09	0°♍		-4571 Jul 25 j 21:21	0°♎	
	-4576 Jun 07 j 11:40	0°♎		-4571 Sep 04 j 16:51	0°♏	
retrograde	-4576 Jul 25 j 06:14	13°♎10'34		-4571 Sep 25 j 19:54	16°♏07'14	
min. Earth dist.	-4576 Aug 24 j 19:01	6°♎47'54	0.51769 AU	-4571 Oct 05 j 09:59	23°♏32'18	
greatest brilliancy	-4576 Aug 30 j 17:13	4°♎34'39	-2.0m	-4571 Oct 13 j 17:10	0°♐	
opposition	-4576 Sep 01 j 06:15	3°♎59'48	-4°-31'-50	-4571 Nov 20 j 21:29	0°♑	
	-4576 Sep 12 j 20:40	30°♑				
direct	-4576 Oct 05 j 19:31	26°♑27'00		conjunction	-4571 Dec 08 j 08:43	13°♑44'36 0°-48'-24
	-4576 Oct 30 j 15:06	0°♑		minimum elong	-4571 Dec 08 j 05:24	13°♑38'05 0°48'32
asc. node	-4576 Dec 20 j 07:34	20°♑39'15			-4571 Dec 29 j 04:15	0°♑
	-4575 Jan 07 j 06:45	0°♑		max. Earth dist.	-4570 Jan 15 j 23:37	13°♑44'12 2.38885 AU
	-4575 Mar 01 j 05:37	0°♑			-4570 Feb 06 j 10:25	0°♑
	-4575 Apr 19 j 23:01	0°♑		morning rise	-4570 Feb 13 j 21:36	5°♑34'27
	-4575 Jun 06 j 12:51	0°♑			-4570 Mar 19 j 09:57	0°♑
evening set	-4575 Jun 28 j 02:34	14°♑04'14			-4570 May 01 j 16:47	0°♑
max. Earth dist.	-4575 Jul 17 j 22:55	27°♑18'19	2.56770 AU		-4570 Jun 16 j 20:56	0°♑
	-4575 Jul 21 j 22:35	0°♑			-4570 Aug 06 j 09:09	0°♑
				asc. node	-4570 Aug 12 j 10:33	3°♑19'43
conjunction	-4575 Aug 15 j 11:26	16°♑50'58	1°07'00		-4570 Oct 10 j 10:36	0°♑
minimum elong	-4575 Aug 15 j 12:27	16°♑52'43	1°07'13	retrograde	-4570 Nov 12 j 11:37	5°♑45'52
	-4575 Sep 03 j 03:53	0°♑			-4570 Dec 12 j 14:52	30°♑
morning rise	-4575 Oct 04 j 17:09	22°♑49'10		opposition	-4570 Dec 21 j 10:22	26°♑38'42 4°08'51
	-4575 Oct 14 j 10:33	0°♑		greatest brilliancy	-4570 Dec 21 j 23:04	26°♑26'10 -1.3m
	-4575 Nov 23 j 06:10	0°♑		min. Earth dist.	-4570 Dec 24 j 16:05	25°♑22'03 0.65413 AU
desc. node	-4575 Dec 22 j 02:53	22°♑10'00		direct	-4569 Jan 31 j 14:03	16°♑37'44
	-4574 Jan 01 j 06:35	0°♑			-4569 Mar 25 j 05:51	0°♑
	-4574 Feb 09 j 07:04	0°♑			-4569 May 20 j 04:01	0°♑
	-4574 Mar 21 j 07:52	0°♑			-4569 Jul 04 j 20:30	0°♑
	-4574 May 02 j 19:05	0°♑		desc. node	-4569 Aug 13 j 18:50	28°♑49'42
	-4574 Jun 19 j 17:59	0°♑			-4569 Aug 15 j 08:29	0°♑
retrograde	-4574 Sep 03 j 17:59	26°♑34'21			-4569 Sep 23 j 14:35	0°♑
min. Earth dist.	-4574 Oct 09 j 07:42	18°♑19'26	0.62125 AU		-4569 Oct 31 j 21:56	0°♑
opposition	-4574 Oct 13 j 13:56	16°♑37'04	0°-59'-42		-4569 Dec 09 j 08:10	0°♑
greatest brilliancy	-4574 Oct 13 j 08:51	16°♑42'09	-1.5m	evening set	-4569 Dec 12 j 17:43	2°♑37'29
asc. node	-4574 Nov 07 j 08:18	8°♑49'55			-4568 Jan 17 j 19:04	0°♑
direct	-4574 Nov 20 j 15:27	7°♑40'01				
	-4573 Feb 02 j 00:21	0°♑		conjunction	-4568 Feb 13 j 06:42	19°♑27'52 -1°-4'-7
	-4573 Mar 29 j 17:33	0°♑		minimum elong	-4568 Feb 13 j 08:21	19°♑30'50 1°04'20
	-4573 May 18 j 05:12	0°♑			-4568 Feb 27 j 23:11	0°♑
	-4573 Jul 03 j 03:59	0°♑		max. Earth dist.	-4568 Mar 24 j 06:40	17°♑43'59 2.51562 AU
evening set	-4573 Aug 11 j 07:23	27°♑09'46		morning rise	-4568 Apr 11 j 11:00	0°♑09'04
	-4573 Aug 15 j 06:41	0°♑			-4568 Apr 11 j 05:38	0°♑
max. Earth dist.	-4573 Aug 27 j 07:16	8°♑41'00	2.45031 AU		-4568 May 26 j 16:48	0°♑
	-4573 Sep 25 j 02:33	0°♑		asc. node	-4568 Jun 29 j 08:25	21°♑19'23
					-4568 Jul 13 j 09:23	0°♑
conjunction	-4573 Oct 04 j 13:19	7°♑08'16	0°24'44		-4568 Sep 02 j 02:59	0°♑
minimum elong	-4573 Oct 04 j 14:53	7°♑11'15	0°24'48		-4568 Oct 31 j 14:51	0°♑
	-4573 Nov 03 j 07:55	0°♑		retrograde	-4568 Dec 22 j 09:23	12°♑36'25
desc. node	-4573 Nov 08 j 23:00	4°♑22'15		opposition	-4567 Jan 28 j 05:04	4°♑33'28 5°14'59
morning rise	-4573 Dec 04 j 11:31	24°♑18'32		greatest brilliancy	-4567 Jan 29 j 19:58	3°♑56'59 -1.7m
	-4573 Dec 11 j 17:53	0°♑		min. Earth dist.	-4567 Feb 04 j 02:29	1°♑58'55 0.57607 AU
	-4572 Jan 19 j 04:51	0°♑			-4567 Feb 09 j 17:07	30°♑
	-4572 Feb 27 j 13:58	0°♑		direct	-4567 Mar 09 j 11:49	24°♑57'21
	-4572 Apr 08 j 18:57	0°♑			-4567 Apr 07 j 21:00	0°♑
	-4572 May 22 j 21:02	0°♑			-4567 Jun 07 j 10:47	0°♑
	-4572 Jul 10 j 23:55	0°♑		desc. node	-4567 Jun 30 j 17:55	15°♑07'46
	-4572 Sep 19 j 12:14	0°♑			-4567 Jul 22 j 02:19	0°♑
asc. node	-4572 Sep 24 j 09:53	0°♑54'09			-4567 Aug 31 j 15:32	0°♑
retrograde	-4572 Oct 08 j 00:23	2°♑01'39			-4567 Oct 09 j 17:46	0°♑
	-4572 Oct 25 j 08:55	30°♑			-4567 Nov 17 j 19:43	0°♑
opposition	-4572 Nov 16 j 22:45	22°♑16'22	1°57'17		-4567 Dec 27 j 21:38	0°♑
min. Earth dist.	-4572 Nov 16 j 09:35	22°♑29'36	0.66904 AU		-4566 Feb 07 j 15:38	0°♑
greatest brilliancy	-4572 Nov 16 j 20:15	22°♑18'53	-1.3m	evening set	-4566 Feb 09 j 14:09	1°♑21'34
direct	-4572 Dec 27 j 05:14	12°♑33'04			-4566 Mar 23 j 08:16	0°♑
	-4571 Feb 28 j 05:11	0°♑				

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 34

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

conjunction	-4566 Apr 04 j 16:30	8° H 14'42	0°-24'-4			-4561 May 04 j 10:46	0° Z	
minimum elong	-4566 Apr 04 j 17:36	8° H 16'31	0°24'09	retrograde		-4561 Jul 07 j 06:58	21° Z 59'08	
max. Earth dist.	-4566 Apr 24 j 18:47	21° H 29'29	2.61649 AU	min. Earth dist.		-4561 Aug 04 j 15:13	16° Z 30'18	0.46759 AU
	-4566 May 07 j 20:29	0° Y		greatest brilliancy		-4561 Aug 10 j 16:14	14° Z 23'45	-2.3m
asc. node	-4566 May 17 j 05:14	6° Y 03'12		opposition		-4561 Aug 12 j 17:05	13° Z 40'41	-5°-46'-53
morning rise	-4566 May 24 j 21:33	10° Y 59'28		direct		-4561 Sep 14 j 14:38	6° Z 55'55	
	-4566 Jun 23 j 17:58	0° X				-4561 Nov 25 j 16:54	0° \approx	
	-4566 Aug 10 j 16:04	0° II		asc. node		-4560 Jan 06 j 22:13	22° \approx 57'43	
	-4566 Sep 28 j 21:19	0° S				-4560 Jan 19 j 02:49	0° H	
	-4566 Nov 20 j 13:22	0° Q				-4560 Mar 09 j 11:50	0° Y	
retrograde	-4565 Feb 15 j 11:54	29° Q 53'45				-4560 Apr 27 j 06:22	0° X	
opposition	-4565 Mar 20 j 13:42	23° Q 37'44	3°32'54	evening set		-4560 Jun 12 j 14:06	29° X 24'36	
greatest brilliancy	-4565 Mar 22 j 04:37	23° Q 06'25	-2.4m			-4560 Jun 13 j 12:00	0° II	
min. Earth dist.	-4565 Mar 28 j 19:59	20° Q 59'02	0.45072 AU	max. Earth dist.		-4560 Jul 06 j 08:10	14° II 56'00	2.60363 AU
direct	-4565 Apr 25 j 18:52	16° Q 02'11				-4560 Jul 28 j 21:21	0° S	
desc. node	-4565 May 18 j 18:04	19° Q 28'35						
	-4565 Jun 14 j 02:48	0° M		conjunction		-4560 Jul 29 j 21:55	0° S 41'33	1°11'10
	-4565 Aug 03 j 00:40	0° L		minimum elong		-4560 Jul 29 j 22:05	0° S 41'49	1°11'23
	-4565 Sep 14 j 15:13	0° M				-4560 Sep 10 j 07:01	0° Q	
	-4565 Oct 25 j 21:21	0° X		morning rise		-4560 Sep 15 j 19:45	3° Q 55'10	
	-4565 Dec 06 j 14:36	0° Z				-4560 Oct 21 j 21:18	0° M	
	-4564 Jan 18 j 15:45	0° \approx				-4560 Dec 01 j 02:06	0° L	
	-4564 Mar 03 j 07:28	0° H		desc. node		-4559 Jan 07 j 19:54	28° L 43'08	
evening set	-4564 Mar 27 j 03:40	15° H 37'22				-4559 Jan 09 j 12:10	0° M	
asc. node	-4564 Apr 03 j 01:57	20° H 07'20				-4559 Feb 17 j 22:57	0° X	
	-4564 Apr 18 j 08:56	0° Y				-4559 Mar 30 j 13:55	0° Z	
						-4559 May 13 j 09:05	0° \approx	
conjunction	-4564 May 15 j 03:04	17° Y 09'30	0°23'18			-4559 Jul 06 j 03:29	0° H	
minimum elong	-4564 May 15 j 02:13	17° Y 08'09	0°23'21	retrograde		-4559 Aug 20 j 00:07	11° H 17'06	
max. Earth dist.	-4564 May 19 j 00:06	19° Y 38'09	2.66608 AU	min. Earth dist.		-4559 Sep 22 j 18:14	3° H 41'22	0.58651 AU
	-4564 Jun 04 j 05:51	0° X		opposition		-4559 Sep 28 j 09:43	1° H 27'36	-2°-19'-35
morning rise	-4564 Jun 30 j 09:46	16° X 41'18		greatest brilliancy		-4559 Sep 27 j 18:26	1° H 42'41	-1.7m
	-4564 Jul 21 j 05:34	0° II				-4559 Oct 02 j 03:47	30° R \approx	
	-4564 Sep 05 j 21:06	0° S		direct		-4559 Nov 04 j 06:06	22° \approx 58'02	
	-4564 Oct 22 j 03:51	0° Q		asc. node		-4559 Nov 23 j 22:45	25° \approx 12'18	
	-4564 Dec 07 j 13:53	0° M				-4559 Dec 10 j 23:21	0° H	
	-4563 Jan 24 j 12:56	0° L				-4558 Feb 13 j 16:38	0° Y	
	-4563 Mar 21 j 21:42	0° M				-4558 Apr 07 j 02:32	0° X	
desc. node	-4563 Apr 04 j 20:15	5° M 10'25				-4558 May 25 j 15:23	0° II	
retrograde	-4563 May 03 j 00:04	9° M 56'36				-4558 Jul 10 j 07:37	0° S	
min. Earth dist.	-4563 Jun 01 j 05:12	5° M 09'02	0.37759 AU	evening set		-4558 Jul 24 j 01:35	9° S 23'07	
opposition	-4563 Jun 02 j 18:12	4° M 44'14	-4°-14'-40	max. Earth dist.		-4558 Aug 08 j 15:54	20° S 14'05	2.49954 AU
greatest brilliancy	-4563 Jun 02 j 08:48	4° M 50'32	-2.9m			-4558 Aug 22 j 10:30	0° Q	
	-4563 Jun 26 j 09:38	30° R L						
direct	-4563 Jul 02 j 18:23	29° L 44'12		conjunction		-4558 Sep 13 j 08:50	15° Q 53'13	0°47'00
	-4563 Jul 09 j 02:16	0° M		minimum elong		-4558 Sep 13 j 10:50	15° Q 56'51	0°47'09
	-4563 Sep 21 j 22:58	0° X				-4558 Oct 02 j 09:49	0° M	
	-4563 Nov 09 j 17:08	0° Z		morning rise		-4558 Nov 08 j 08:50	28° M 06'32	
	-4563 Dec 26 j 10:09	0° \approx				-4558 Nov 10 j 19:40	0° L	
	-4562 Feb 11 j 05:57	0° H		desc. node		-4558 Nov 25 j 18:25	11° L 34'40	
asc. node	-4562 Feb 18 j 23:00	4° H 54'24				-4558 Dec 19 j 09:51	0° M	
	-4562 Mar 30 j 13:28	0° Y				-4557 Jan 27 j 00:20	0° X	
evening set	-4562 May 06 j 02:47	23° Y 07'02				-4557 Mar 07 j 12:49	0° Z	
	-4562 May 16 j 23:14	0° X				-4557 Apr 18 j 00:05	0° \approx	
max. Earth dist.	-4562 Jun 11 j 17:10	16° X 25'25	2.66125 AU			-4557 Jun 01 j 20:57	0° H	
						-4557 Jul 24 j 05:48	0° Y	
conjunction	-4562 Jun 21 j 23:03	23° X 00'19	0°58'44	retrograde		-4557 Sep 25 j 13:21	18° Y 55'10	
minimum elong	-4562 Jun 21 j 21:51	22° X 58'22	0°58'54	asc. node		-4557 Oct 11 j 23:50	17° Y 04'29	
	-4562 Jul 02 j 18:56	0° II		min. Earth dist.		-4557 Nov 02 j 14:09	9° Y 50'02	0.65773 AU
morning rise	-4562 Aug 06 j 08:25	22° II 37'16		opposition		-4557 Nov 04 j 14:34	9° Y 01'16	0°53'58
	-4562 Aug 17 j 11:00	0° S		greatest brilliancy		-4557 Nov 04 j 11:44	9° Y 04'07	-1.3m
	-4562 Sep 30 j 17:24	0° Q				-4557 Dec 05 j 17:14	30° R H	
	-4562 Nov 12 j 16:17	0° M		direct		-4557 Dec 14 j 04:18	29° H 32'34	
	-4562 Dec 24 j 14:55	0° L				-4557 Dec 22 j 22:53	0° Y	
	-4561 Feb 04 j 03:43	0° M				-4556 Mar 12 j 16:55	0° X	
desc. node	-4561 Feb 20 j 21:05	11° M 59'40				-4556 May 04 j 02:43	0° II	
	-4561 Mar 18 j 12:36	0° X				-4556 Jun 19 j 23:29	0° S	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 35

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4556 Aug 02 j 07:59	0°♂					-4551 Jun 30 j 22:01	0°♂			
evening set	-4556 Sep 11 j 14:34	29°♂36'40					-4551 Aug 18 j 13:36	0°♂			
	-4556 Sep 12 j 02:57	0°♂					-4551 Oct 08 j 21:28	0°♂			
desc. node	-4556 Oct 12 j 15:02	23°♂20'35					-4551 Dec 09 j 07:20	0°♂			
max. Earth dist.	-4556 Oct 19 j 09:25	28°♂35'57	2.38321 AU		retrograde		-4550 Jan 22 j 09:58	9°♂39'26			
	-4556 Oct 21 j 04:34	0°♂			opposition		-4550 Feb 26 j 05:39	2°♂35'23	4°46'59		
					greatest brilliancy		-4550 Feb 28 j 05:20	1°♂53'49	-2.0m		
conjunction	-4556 Nov 10 j 21:10	16°♂11'51	0°-20'-57				-4550 Mar 05 j 16:35	30°♂			
minimum elong	-4556 Nov 10 j 19:24	16°♂08'21	0°20'58		min. Earth dist.		-4550 Mar 06 j 16:03	29°♂40'07	0.50253 AU		
	-4556 Nov 28 j 10:16	0°♂			direct		-4550 Apr 05 j 14:14	23°♂56'13			
	-4555 Jan 05 j 17:39	0°♂					-4550 May 07 j 03:03	0°♂			
morning rise	-4555 Jan 17 j 04:30	8°♂51'34			desc. node		-4550 Jun 04 j 11:12	12°♂54'10			
	-4555 Feb 13 j 23:29	0°♂					-4550 Jul 03 j 03:48	0°♂			
	-4555 Mar 26 j 22:54	0°♂					-4550 Aug 15 j 14:06	0°♂			
	-4555 May 09 j 09:07	0°♂					-4550 Sep 25 j 01:45	0°♂			
	-4555 Jun 25 j 04:50	0°♂					-4550 Nov 04 j 02:42	0°♂			
	-4555 Aug 17 j 09:51	0°♂					-4550 Dec 14 j 23:08	0°♂			
asc. node	-4555 Aug 29 j 00:41	5°♂37'40					-4549 Jan 26 j 08:26	0°♂			
retrograde	-4555 Oct 29 j 09:34	22°♂45'48			evening set		-4549 Mar 11 j 04:03	29°♂45'33			
opposition	-4555 Dec 07 j 20:42	13°♂21'00	3°23'50				-4549 Mar 11 j 12:43	0°♂			
greatest brilliancy	-4555 Dec 08 j 01:25	13°♂16'18	-1.3m		asc. node		-4549 Apr 20 j 18:18	26°♂24'46			
min. Earth dist.	-4555 Dec 09 j 14:41	12°♂39'11	0.66754 AU				-4549 Apr 26 j 07:18	0°♂			
direct	-4554 Jan 17 j 20:15	3°♂23'23									
	-4554 Apr 08 j 12:04	0°♂			conjunction		-4549 Apr 30 j 17:19	2°♂51'10	0°05'41		
	-4554 May 29 j 12:49	0°♂			minimum elong		-4549 Apr 30 j 17:05	2°♂50'48	0°05'41		
	-4554 Jul 13 j 02:48	0°♂			behind sun begin		-4549 Apr 29 j 21:59	2°♂20'00			
	-4554 Aug 23 j 06:02	0°♂			behind sun end		-4549 May 01 j 12:11	3°♂21'36			
desc. node	-4554 Aug 30 j 12:04	5°♂28'29			max. Earth dist.		-4549 May 10 j 11:32	9°♂08'14	2.65321 AU		
	-4554 Oct 01 j 08:37	0°♂					-4549 Jun 12 j 02:44	0°♂			
	-4554 Nov 08 j 13:46	0°♂			morning rise		-4549 Jun 17 j 03:25	3°♂12'00			
evening set	-4554 Nov 15 j 18:25	5°♂39'32					-4549 Jul 29 j 08:24	0°♂			
	-4554 Dec 16 j 21:41	0°♂					-4549 Sep 14 j 16:54	0°♂			
							-4549 Nov 01 j 12:06	0°♂			
conjunction	-4553 Jan 19 j 19:13	25°♂55'22	-1°-8'-6				-4549 Dec 21 j 05:31	0°♂			
minimum elong	-4553 Jan 19 j 18:53	25°♂54'45	1°08'21				-4548 Feb 18 j 01:07	0°♂			
	-4553 Jan 25 j 05:34	0°♂			retrograde		-4548 Apr 01 j 02:46	9°♂47'44			
	-4553 Mar 07 j 06:26	0°♂			desc. node		-4548 Apr 21 j 11:52	7°♂19'26			
max. Earth dist.	-4553 Mar 07 j 18:52	0°♂22'09	2.46499 AU		opposition		-4548 May 01 j 20:30	4°♂38'56	0°-46'-11		
morning rise	-4553 Mar 23 j 04:34	11°♂14'44			greatest brilliancy		-4548 May 01 j 23:53	4°♂36'37	-2.8m		
	-4553 Apr 19 j 11:05	0°♂			min. Earth dist.		-4548 May 05 j 15:38	3°♂36'34	0.38763 AU		
	-4553 Jun 04 j 01:15	0°♂					-4548 May 21 j 15:34	30°♂			
asc. node	-4553 Jul 17 j 00:50	26°♂45'49			direct		-4548 Jun 02 j 12:14	29°♂03'30			
	-4553 Jul 22 j 10:01	0°♂					-4548 Jun 14 j 10:15	0°♂			
	-4553 Sep 13 j 15:17	0°♂					-4548 Aug 21 j 18:19	0°♂			
retrograde	-4553 Dec 06 j 09:45	27°♂43'44					-4548 Oct 07 j 04:44	0°♂			
opposition	-4552 Jan 13 j 05:15	19°♂11'37	5°00'17				-4548 Nov 20 j 14:08	0°♂			
greatest brilliancy	-4552 Jan 14 j 09:43	18°♂44'12	-1.5m				-4547 Jan 04 j 06:56	0°♂			
min. Earth dist.	-4552 Jan 18 j 17:55	17°♂04'10	0.61385 AU				-4547 Feb 19 j 00:14	0°♂			
direct	-4552 Feb 23 j 02:48	9°♂18'18			asc. node		-4547 Mar 07 j 15:25	10°♂44'38			
	-4552 Apr 29 j 14:35	0°♂					-4547 Apr 06 j 16:56	0°♂			
	-4552 Jun 18 j 16:55	0°♂			evening set		-4547 Apr 21 j 00:01	9°♂06'34			
desc. node	-4552 Jul 17 j 10:52	19°♂49'09					-4547 May 23 j 19:56	0°♂			
	-4552 Jul 31 j 12:42	0°♂			max. Earth dist.		-4547 Jun 02 j 14:29	6°♂13'44	2.66972 AU		
	-4552 Sep 09 j 08:39	0°♂									
	-4552 Oct 18 j 00:31	0°♂			conjunction		-4547 Jun 07 j 08:28	9°♂15'39	0°47'06		
	-4552 Nov 25 j 18:10	0°♂			minimum elong		-4547 Jun 07 j 07:11	9°♂13'36	0°47'14		
	-4551 Jan 04 j 12:21	0°♂					-4547 Jul 09 j 15:53	0°♂			
evening set	-4551 Jan 19 j 04:05	10°♂45'49			morning rise		-4547 Jul 22 j 17:27	8°♂27'37			
	-4551 Feb 14 j 23:19	0°♂					-4547 Aug 24 j 14:55	0°♂			
							-4547 Oct 08 j 11:43	0°♂			
conjunction	-4551 Mar 17 j 07:08	21°♂04'40	0°-42'-18				-4547 Nov 21 j 09:08	0°♂			
minimum elong	-4551 Mar 17 j 09:00	21°♂07'52	0°42'27				-4546 Jan 03 j 15:59	0°♂			
	-4551 Mar 30 j 10:28	0°♂					-4546 Feb 16 j 05:03	0°♂			
max. Earth dist.	-4551 Apr 13 j 19:43	9°♂38'05	2.58276 AU		desc. node		-4546 Mar 09 j 14:31	14°♂16'05			
morning rise	-4551 May 09 j 01:31	26°♂14'32					-4546 Apr 03 j 16:19	0°♂			
	-4551 May 14 j 20:24	0°♂			retrograde		-4546 Jun 15 j 04:59	26°♂56'41			
asc. node	-4551 Jun 02 j 22:15	12°♂16'38			min. Earth dist.		-4546 Jul 11 j 22:29	22°♂15'26	0.41995 AU		

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 36

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

greatest brilliancy	-4546 Jul 17 j 08:31	20° ♁ 33'43	-2.6m	conjunction	-4541 Oct 17 j 15:15	20° ♁ 44'13	0°09'10
opposition	-4546 Jul 19 j 09:50	19° ♁ 54'42	-6°-25'-56	minimum elong	-4541 Oct 17 j 15:56	20° ♁ 45'32	0°09'12
direct	-4546 Aug 19 j 13:28	14° ♁ 04'02		behind sun begin	-4541 Oct 16 j 18:39	20° ♁ 04'32	
	-4546 Oct 15 j 00:35	0° ♁		behind sun end	-4541 Oct 18 j 13:14	21° ♁ 26'34	
	-4546 Dec 09 j 11:44	0° ♁			-4541 Oct 29 j 14:25	0° ♁	
asc. node	-4545 Jan 23 j 13:25	27° ♁ 00'30		desc. node	-4541 Oct 30 j 08:54	0° ♁ 35'54	
	-4545 Jan 28 j 11:11	0° ♁			-4541 Dec 06 j 22:29	0° ♁	
	-4545 Mar 18 j 06:27	0° ♁		morning rise	-4541 Dec 20 j 07:54	10° ♁ 30'21	
	-4545 May 05 j 08:52	0° ♁			-4540 Jan 14 j 07:37	0° ♁	
evening set	-4545 May 29 j 13:07	15° ♁ 19'11			-4540 Feb 22 j 14:42	0° ♁	
	-4545 Jun 21 j 09:13	0° ♁			-4540 Apr 03 j 16:13	0° ♁	
max. Earth dist.	-4545 Jun 26 j 21:26	3° ♁ 34'41	2.63246 AU		-4540 May 17 j 10:00	0° ♁	
					-4540 Jul 04 j 09:02	0° ♁	
conjunction	-4545 Jul 15 j 08:03	15° ♁ 39'54	1°09'50		-4540 Sep 01 j 15:45	0° ♁	
minimum elong	-4545 Jul 15 j 07:30	15° ♁ 39'00	1°10'03	asc. node	-4540 Sep 14 j 16:25	4° ♁ 36'34	
	-4545 Aug 05 j 20:07	0° ♁		retrograde	-4540 Oct 15 j 18:04	9° ♁ 54'00	
morning rise	-4545 Aug 30 j 17:40	16° ♁ 57'03		opposition	-4540 Nov 24 j 13:51	0° ♁ 15'08	2°31'09
	-4545 Sep 18 j 12:29	0° ♁		greatest brilliancy	-4540 Nov 24 j 13:04	0° ♁ 15'56	-1.3m
	-4545 Oct 30 j 13:11	0° ♁		min. Earth dist.	-4540 Nov 24 j 20:10	0° ♁ 08'49	0.67116 AU
	-4545 Dec 10 j 06:39	0° ♁			-4540 Nov 25 j 04:58	30° ♁	
	-4544 Jan 19 j 06:25	0° ♁		direct	-4539 Jan 04 j 04:09	20° ♁ 25'43	
desc. node	-4544 Jan 25 j 14:51	4° ♁ 46'33			-4539 Feb 17 j 07:48	0° ♁	
	-4544 Feb 28 j 09:10	0° ♁			-4539 Apr 19 j 06:47	0° ♁	
	-4544 Apr 10 j 01:38	0° ♁			-4539 Jun 07 j 00:34	0° ♁	
	-4544 May 26 j 19:49	0° ♁			-4539 Jul 20 j 23:14	0° ♁	
retrograde	-4544 Aug 04 j 01:59	24° ♁ 18'05			-4539 Aug 30 j 21:46	0° ♁	
min. Earth dist.	-4544 Sep 04 j 19:12	17° ♁ 28'03	0.54371 AU	desc. node	-4539 Sep 16 j 06:14	12° ♁ 25'58	
greatest brilliancy	-4544 Sep 10 j 12:09	15° ♁ 16'31	-1.9m		-4539 Oct 08 j 23:02	0° ♁	
opposition	-4544 Sep 11 j 17:07	14° ♁ 48'39	-3°-43'-46	evening set	-4539 Oct 19 j 20:40	8° ♁ 31'51	
direct	-4544 Oct 17 j 03:09	6° ♁ 53'33			-4539 Nov 16 j 03:21	0° ♁	
asc. node	-4544 Dec 10 j 12:48	20° ♁ 58'34					
	-4544 Dec 29 j 22:52	0° ♁		conjunction	-4539 Dec 24 j 00:07	29° ♁ 40'56	0°-59'-26
	-4543 Feb 23 j 09:57	0° ♁		minimum elong	-4539 Dec 23 j 21:18	29° ♁ 35'28	0°59'36
	-4543 Apr 14 j 22:21	0° ♁			-4539 Dec 24 j 09:56	0° ♁	
	-4543 Jun 01 j 19:49	0° ♁			-4538 Feb 01 j 15:46	0° ♁	
evening set	-4543 Jul 07 j 06:51	23° ♁ 14'24		max. Earth dist.	-4538 Feb 09 j 14:25	5° ♁ 56'06	2.41331 AU
	-4543 Jul 17 j 08:01	0° ♁		morning rise	-4538 Feb 28 j 05:37	19° ♁ 38'27	
max. Earth dist.	-4543 Jul 25 j 05:00	5° ♁ 21'17	2.54495 AU		-4538 Mar 14 j 14:27	0° ♁	
					-4538 Apr 26 j 19:00	0° ♁	
conjunction	-4543 Aug 25 j 11:33	27° ♁ 07'25	1°01'44		-4538 Jun 11 j 15:35	0° ♁	
minimum elong	-4543 Aug 25 j 13:01	27° ♁ 10'01	1°01'55		-4538 Jul 31 j 02:45	0° ♁	
	-4543 Aug 29 j 12:41	0° ♁		asc. node	-4538 Aug 02 j 16:05	1° ♁ 28'01	
	-4543 Oct 09 j 16:55	0° ♁			-4538 Sep 27 j 07:13	0° ♁	
morning rise	-4543 Oct 16 j 10:45	5° ♁ 01'54		retrograde	-4538 Nov 20 j 21:43	13° ♁ 52'29	
	-4543 Nov 18 j 09:06	0° ♁		opposition	-4538 Dec 29 j 12:14	4° ♁ 56'35	4°30'51
desc. node	-4543 Dec 12 j 12:16	18° ♁ 35'43		greatest brilliancy	-4538 Dec 30 j 06:15	4° ♁ 38'57	-1.4m
	-4543 Dec 27 j 05:33	0° ♁		min. Earth dist.	-4537 Jan 02 j 13:48	3° ♁ 21'09	0.64234 AU
	-4542 Feb 04 j 01:52	0° ♁			-4537 Jan 11 j 15:34	30° ♁	
	-4542 Mar 15 j 20:48	0° ♁		direct	-4537 Feb 08 j 15:46	24° ♁ 56'26	
	-4542 Apr 26 j 19:49	0° ♁			-4537 Mar 10 j 23:14	0° ♁	
	-4542 Jun 12 j 03:59	0° ♁			-4537 May 13 j 09:49	0° ♁	
	-4542 Aug 12 j 21:40	0° ♁			-4537 Jun 29 j 05:36	0° ♁	
retrograde	-4542 Sep 11 j 20:09	5° ♁ 13'31		desc. node	-4537 Aug 04 j 03:54	25° ♁ 35'11	
	-4542 Oct 09 j 14:39	30° ♁			-4537 Aug 10 j 03:11	0° ♁	
min. Earth dist.	-4542 Oct 18 j 07:57	26° ♁ 39'48	0.63664 AU		-4537 Sep 18 j 13:45	0° ♁	
opposition	-4542 Oct 21 j 19:32	25° ♁ 15'52	0°-16'-5		-4537 Oct 26 j 23:38	0° ♁	
greatest brilliancy	-4542 Oct 21 j 18:23	25° ♁ 17'01	-1.4m		-4537 Dec 04 j 11:55	0° ♁	
asc. node	-4542 Oct 28 j 14:23	22° ♁ 36'26		evening set	-4537 Dec 27 j 06:33	17° ♁ 25'11	
direct	-4542 Nov 29 j 11:32	16° ♁ 06'18			-4536 Jan 13 j 00:34	0° ♁	
	-4541 Jan 23 j 10:47	0° ♁			-4536 Feb 23 j 05:56	0° ♁	
	-4541 Mar 23 j 18:36	0° ♁					
	-4541 May 13 j 03:12	0° ♁		conjunction	-4536 Feb 25 j 21:31	1° ♁ 52'46	0°-57'-45
	-4541 Jun 28 j 09:34	0° ♁		minimum elong	-4536 Feb 25 j 23:35	1° ♁ 56'25	0°57'56
	-4541 Aug 10 j 14:36	0° ♁		max. Earth dist.	-4536 Apr 01 j 11:00	26° ♁ 33'21	2.54133 AU
evening set	-4541 Aug 22 j 09:30	8° ♁ 30'17			-4536 Apr 06 j 12:52	0° ♁	
max. Earth dist.	-4541 Sep 09 j 19:42	22° ♁ 03'36	2.42339 AU	morning rise	-4536 Apr 21 j 22:41	10° ♁ 20'22	
	-4541 Sep 20 j 10:24	0° ♁			-4536 May 21 j 22:05	0° ♁	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 37

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

asc. node	-4536 Jun 19 j 14:24	18° Υ 18'35			-4531 Nov 01 j 18:46	0° \eth		
	-4536 Jul 08 j 07:18	0° \eth			-4531 Dec 20 j 07:31	0° \approx		
	-4536 Aug 27 j 01:44	0° Π			-4530 Feb 05 j 23:26	0° \mathfrak{H}		
	-4536 Oct 21 j 05:49	0° \eth		asc. node	-4530 Feb 09 j 04:24	2° \mathfrak{H} 01'06		
retrograde	-4535 Jan 01 j 20:59	22° \eth 08'10			-4530 Mar 25 j 17:12	0° Υ		
opposition	-4535 Feb 07 j 01:46	14° \eth 24'01	5°13'31		-4530 May 12 j 08:02	0° \eth		
greatest brilliancy	-4535 Feb 08 j 21:34	13° \eth 43'47	-1.8m	evening set	-4530 May 14 j 16:32	1° \eth 29'30		
min. Earth dist.	-4535 Feb 14 j 15:57	11° \eth 37'32	0.55155 AU	max. Earth dist.	-4530 Jun 17 j 05:45	22° \eth 54'34	2.65327 AU	
direct	-4535 Mar 18 j 20:14	5° \eth 03'08			-4530 Jun 28 j 05:20	0° Π		
	-4535 May 29 j 20:42	0° Ω						
desc. node	-4535 Jun 21 j 03:39	13° Ω 35'05		conjunction	-4530 Jun 30 j 09:27	1° Π 24'29	1°03'57	
	-4535 Jul 15 j 13:57	0° \mathfrak{H}		minimum elong	-4530 Jun 30 j 08:25	1° Π 22'47	1°04'08	
	-4535 Aug 25 j 20:04	0° \eth			-4530 Aug 12 j 19:30	0° \eth		
	-4535 Oct 04 j 06:57	0° \mathfrak{M}		morning rise	-4530 Aug 14 j 23:32	1° \eth 27'07		
	-4535 Nov 12 j 15:03	0° \mathfrak{J}			-4530 Sep 25 j 20:41	0° Ω		
	-4535 Dec 22 j 21:59	0° \eth			-4530 Nov 07 j 10:42	0° \mathfrak{H}		
	-4534 Feb 02 j 20:01	0° \approx			-4530 Dec 18 j 21:15	0° \eth		
evening set	-4534 Feb 20 j 20:12	12° \approx 29'09			-4529 Jan 28 j 17:25	0° \mathfrak{M}		
	-4534 Mar 18 j 15:44	0° \mathfrak{H}		desc. node	-4529 Feb 11 j 07:18	9° \mathfrak{M} 57'22		
					-4529 Mar 10 j 23:51	0° \mathfrak{J}		
conjunction	-4534 Apr 14 j 11:57	17° \mathfrak{H} 47'43	0°-13'-6		-4529 Apr 23 j 23:23	0° \eth		
minimum elong	-4534 Apr 14 j 12:32	17° \mathfrak{H} 48'40	0°13'10		-4529 Jun 21 j 03:14	0° \approx		
behind sun begin	-4534 Apr 14 j 00:50	17° \mathfrak{H} 29'30		retrograde	-4529 Jul 18 j 09:13	4° \approx 50'37		
behind sun end	-4534 Apr 15 j 00:13	18° \mathfrak{H} 07'51			-4529 Aug 13 j 16:05	30° $\mathfrak{R}\eth$		
max. Earth dist.	-4534 Apr 30 j 17:25	28° \mathfrak{H} 23'07	2.63195 AU	min. Earth dist.	-4529 Aug 16 j 22:45	28° \eth 51'45	0.49545 AU	
	-4534 May 03 j 05:11	0° Υ		greatest brilliancy	-4529 Aug 22 j 23:43	26° \eth 39'26	-2.1m	
asc. node	-4534 May 07 j 10:52	2° Υ 44'31		opposition	-4529 Aug 24 j 18:45	25° \eth 59'56	-5°-6'-22	
morning rise	-4534 Jun 02 j 13:05	19° Υ 30'05		direct	-4529 Sep 27 j 13:56	18° \eth 47'38		
	-4534 Jun 19 j 00:58	0° \eth			-4529 Nov 13 j 12:18	0° \approx		
	-4534 Aug 05 j 15:46	0° Π		asc. node	-4529 Dec 28 j 04:19	21° \approx 38'58		
	-4534 Sep 23 j 01:15	0° \eth			-4528 Jan 12 j 09:47	0° \mathfrak{H}		
	-4534 Nov 12 j 08:55	0° Ω			-4528 Mar 04 j 02:35	0° Υ		
	-4533 Jan 09 j 07:42	0° \mathfrak{H}			-4528 Apr 22 j 09:42	0° \eth		
retrograde	-4533 Mar 02 j 19:02	13° \mathfrak{H} 17'26			-4528 Jun 08 j 20:41	0° Π		
opposition	-4533 Apr 03 j 21:09	7° \mathfrak{H} 28'39	2°20'29	evening set	-4528 Jun 21 j 09:54	8° Π 09'02		
greatest brilliancy	-4533 Apr 04 j 22:23	7° \mathfrak{H} 09'23	-2.5m	max. Earth dist.	-4528 Jul 12 j 20:32	22° Π 18'38	2.58475 AU	
min. Earth dist.	-4533 Apr 11 j 05:29	5° \mathfrak{H} 14'34	0.42414 AU		-4528 Jul 24 j 07:15	0° \eth		
direct	-4533 May 08 j 14:06	0° \mathfrak{H} 35'39						
desc. node	-4533 May 09 j 05:36	0° \mathfrak{H} 35'49		conjunction	-4528 Aug 08 j 05:29	10° \eth 10'14	1°09'30	
	-4533 Jul 24 j 04:45	0° \eth		minimum elong	-4528 Aug 08 j 06:08	10° \eth 11'21	1°09'42	
	-4533 Sep 07 j 07:18	0° \mathfrak{M}			-4528 Sep 05 j 15:34	0° Ω		
	-4533 Oct 19 j 15:38	0° \mathfrak{J}		morning rise	-4528 Sep 26 j 07:07	14° Ω 47'18		
	-4533 Dec 01 j 00:50	0° \eth			-4528 Oct 17 j 02:24	0° \mathfrak{H}		
	-4532 Jan 13 j 12:24	0° \approx			-4528 Nov 26 j 02:36	0° \eth		
	-4532 Feb 27 j 11:18	0° \mathfrak{H}		desc. node	-4528 Dec 29 j 06:25	25° \eth 21'58		
asc. node	-4532 Mar 24 j 06:25	16° \mathfrak{H} 49'07			-4527 Jan 04 j 07:06	0° \mathfrak{M}		
evening set	-4532 Apr 05 j 10:44	24° \mathfrak{H} 41'09			-4527 Feb 12 j 11:22	0° \mathfrak{J}		
	-4532 Apr 13 j 17:04	0° Υ			-4527 Mar 24 j 16:34	0° \eth		
					-4527 May 06 j 12:55	0° \approx		
conjunction	-4532 May 23 j 17:13	25° Υ 34'43	0°32'44		-4527 Jun 25 j 00:35	0° \mathfrak{H}		
minimum elong	-4532 May 23 j 16:08	25° Υ 33'00	0°32'49	retrograde	-4527 Aug 28 j 13:35	20° \mathfrak{H} 37'59		
max. Earth dist.	-4532 May 24 j 09:59	26° Υ 01'26	2.66981 AU	min. Earth dist.	-4527 Oct 02 j 08:27	12° \mathfrak{H} 40'17	0.60675 AU	
	-4532 May 30 j 15:35	0° \eth		opposition	-4527 Oct 07 j 06:17	10° \mathfrak{H} 43'02	-1°-32'-39	
morning rise	-4532 Jul 08 j 12:54	24° \eth 50'59		greatest brilliancy	-4527 Oct 06 j 21:20	10° \mathfrak{H} 51'57	-1.6m	
	-4532 Jul 16 j 13:31	0° Π		direct	-4527 Nov 13 j 19:55	1° \mathfrak{H} 57'30		
	-4532 Aug 31 j 22:13	0° \eth		asc. node	-4527 Nov 14 j 04:48	1° \mathfrak{H} 57'33		
	-4532 Oct 16 j 14:48	0° Ω			-4526 Feb 06 j 11:25	0° Υ		
	-4532 Nov 30 j 21:53	0° \mathfrak{H}			-4526 Apr 01 j 15:18	0° \eth		
	-4531 Jan 15 j 13:23	0° \eth			-4526 May 20 j 17:46	0° Π		
	-4531 Mar 04 j 22:03	0° \mathfrak{M}			-4526 Jul 05 j 14:50	0° \eth		
desc. node	-4531 Mar 26 j 07:02	11° \mathfrak{M} 36'53		evening set	-4526 Aug 03 j 06:31	19° \eth 43'11		
retrograde	-4531 May 19 j 16:29	27° \mathfrak{M} 44'09			-4526 Aug 17 j 18:52	0° Ω		
min. Earth dist.	-4531 Jun 16 j 03:21	23° \mathfrak{M} 15'45	0.38571 AU	max. Earth dist.	-4526 Aug 18 j 12:54	0° Ω 32'17	2.47258 AU	
greatest brilliancy	-4531 Jun 19 j 08:23	22° \mathfrak{M} 21'54	-2.8m					
opposition	-4531 Jun 20 j 11:53	22° \mathfrak{M} 02'38	-5°-37'-11	conjunction	-4526 Sep 25 j 02:05	28° Ω 01'48	0°35'10	
direct	-4531 Jul 20 j 09:57	16° \mathfrak{M} 55'26		minimum elong	-4526 Sep 25 j 03:59	28° Ω 05'21	0°35'17	
	-4531 Sep 07 j 19:29	0° \mathfrak{J}			-4526 Sep 27 j 17:15	0° \mathfrak{H}		

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4526 Nov 06 j 01:18	0°♄		opposition	-4520 Jan 22 j 04:07	28°♄14'22	5°10'29
desc. node	-4526 Nov 16 j 03:10	7°♄49'03		greatest brilliancy	-4520 Jan 23 j 14:29	27°♄41'44	-1.6m
morning rise	-4526 Nov 22 j 17:31	12°♄57'13		min. Earth dist.	-4520 Jan 28 j 11:36	25°♄50'59	0.59417 AU
	-4526 Dec 14 j 13:14	0°♄		direct	-4520 Mar 02 j 19:22	18°♄29'10	
	-4525 Jan 22 j 01:20	0°♄			-4520 Apr 18 j 12:53	0°♄	
	-4525 Mar 02 j 10:59	0°♄			-4520 Jun 11 j 23:25	0°♄	
	-4525 Apr 12 j 16:45	0°♄		desc. node	-4520 Jul 07 j 21:37	17°♄19'54	
	-4525 May 26 j 23:41	0°♄			-4520 Jul 25 j 18:18	0°♄	
	-4525 Jul 16 j 00:44	0°♄			-4520 Sep 03 j 23:55	0°♄	
asc. node	-4525 Oct 02 j 06:29	26°♄55'39			-4520 Oct 12 j 21:05	0°♄	
retrograde	-4525 Oct 03 j 06:57	26°♄56'04			-4520 Nov 20 j 18:26	0°♄	
min. Earth dist.	-4525 Nov 11 j 02:29	17°♄35'46	0.66519 AU		-4520 Dec 30 j 15:45	0°♄	
opposition	-4525 Nov 12 j 07:40	17°♄06'24	1°31'37	evening set	-4519 Jan 31 j 14:47	23°♄11'37	
greatest brilliancy	-4525 Nov 12 j 04:28	17°♄09'38	-1.3m		-4519 Feb 10 j 05:05	0°♄	
direct	-4525 Dec 22 j 07:51	7°♄29'08			-4519 Mar 25 j 17:54	0°♄	
	-4524 Mar 05 j 02:14	0°♄					
	-4524 Apr 28 j 13:00	0°♄		conjunction	-4519 Mar 28 j 00:24	1°♄31'42	0°-31'-56
	-4524 Jun 14 j 23:32	0°♄		minimum elong	-4519 Mar 28 j 01:51	1°♄34'08	0°32'03
	-4524 Jul 28 j 12:53	0°♄		max. Earth dist.	-4519 Apr 20 j 10:49	17°♄07'10	2.60233 AU
	-4524 Sep 07 j 09:04	0°♄			-4519 May 10 j 03:47	0°♄	
evening set	-4524 Sep 24 j 18:22	13°♄13'39		morning rise	-4519 May 18 j 06:50	5°♄15'26	
desc. node	-4524 Oct 02 j 23:45	19°♄33'39		asc. node	-4519 May 24 j 02:36	9°♄00'25	
	-4524 Oct 16 j 10:32	0°♄			-4519 Jun 26 j 02:05	0°♄	
	-4524 Nov 23 j 15:27	0°♄			-4519 Aug 13 j 06:25	0°♄	
					-4519 Oct 02 j 05:37	0°♄	
conjunction	-4524 Nov 26 j 05:50	2°♄02'52	0°-37'-26		-4519 Nov 26 j 10:06	0°♄	
minimum elong	-4524 Nov 26 j 02:52	1°♄57'00	0°37'31	retrograde	-4518 Feb 04 j 13:06	21°♄09'04	
max. Earth dist.	-4524 Dec 10 j 03:02	12°♄57'58	2.37699 AU	opposition	-4518 Mar 10 j 10:08	14°♄30'54	4°11'35
	-4524 Dec 31 j 22:03	0°♄		greatest brilliancy	-4518 Mar 12 j 07:02	13°♄53'19	-2.2m
morning rise	-4523 Feb 02 j 03:41	24°♄44'20		min. Earth dist.	-4518 Mar 18 j 22:30	11°♄40'45	0.47377 AU
	-4523 Feb 09 j 03:15	0°♄		direct	-4518 Apr 16 j 17:18	6°♄23'58	
	-4523 Mar 22 j 01:20	0°♄		desc. node	-4518 May 25 j 21:18	15°♄34'29	
	-4523 May 04 j 07:53	0°♄			-4518 Jun 23 j 05:17	0°♄	
	-4523 Jun 19 j 15:48	0°♄			-4518 Aug 08 j 08:10	0°♄	
	-4523 Aug 09 j 23:34	0°♄			-4518 Sep 18 j 20:02	0°♄	
asc. node	-4523 Aug 19 j 07:42	4°♄55'48			-4518 Oct 29 j 10:48	0°♄	
	-4523 Oct 27 j 03:08	0°♄			-4518 Dec 09 j 17:02	0°♄	
retrograde	-4523 Nov 06 j 09:17	0°♄38'04			-4517 Jan 21 j 09:20	0°♄	
	-4523 Nov 16 j 06:16	30°♄			-4517 Mar 06 j 18:37	0°♄	
opposition	-4523 Dec 15 j 14:42	21°♄22'28	3°50'48	evening set	-4517 Mar 21 j 00:19	9°♄24'03	
greatest brilliancy	-4523 Dec 15 j 23:33	21°♄13'42	-1.3m	asc. node	-4517 Apr 10 j 23:46	23°♄05'32	
min. Earth dist.	-4523 Dec 18 j 04:16	20°♄21'29	0.66145 AU		-4517 Apr 21 j 15:54	0°♄	
direct	-4522 Jan 25 j 17:52	11°♄22'27					
	-4522 Mar 31 j 03:10	0°♄		conjunction	-4517 May 09 j 15:19	11°♄33'48	0°16'05
	-4522 May 23 j 15:47	0°♄		minimum elong	-4517 May 09 j 14:42	11°♄32'48	0°16'07
	-4522 Jul 07 j 21:34	0°♄		max. Earth dist.	-4517 May 16 j 01:18	15°♄40'28	2.66133 AU
	-4522 Aug 18 j 06:34	0°♄			-4517 Jun 07 j 11:38	0°♄	
desc. node	-4522 Aug 20 j 22:40	2°♄00'11		morning rise	-4517 Jun 25 j 08:55	11°♄23'46	
	-4522 Sep 26 j 11:37	0°♄			-4517 Jul 24 j 13:43	0°♄	
	-4522 Nov 03 j 17:47	0°♄			-4517 Sep 09 j 12:13	0°♄	
evening set	-4522 Dec 01 j 02:45	21°♄27'43			-4517 Oct 26 j 09:29	0°♄	
	-4522 Dec 12 j 02:17	0°♄			-4517 Dec 12 j 23:50	0°♄	
	-4521 Jan 20 j 10:50	0°♄			-4516 Feb 01 j 19:56	0°♄	
				desc. node	-4516 Apr 11 j 23:22	26°♄30'30	
conjunction	-4521 Feb 03 j 00:21	10°♄04'15	-1°-7'-6	retrograde	-4516 Apr 19 j 05:22	26°♄50'20	
minimum elong	-4521 Feb 03 j 01:20	10°♄06'04	1°07'20	opposition	-4516 May 19 j 14:59	21°♄47'30	-2°-48'-38
	-4521 Mar 02 j 12:04	0°♄		greatest brilliancy	-4516 May 19 j 16:27	21°♄46'32	-2.9m
max. Earth dist.	-4521 Mar 18 j 12:59	11°♄19'29	2.49354 AU	min. Earth dist.	-4516 May 20 j 14:11	21°♄32'05	0.37811 AU
morning rise	-4521 Apr 04 j 01:06	22°♄45'19		direct	-4516 Jun 19 j 02:52	16°♄39'26	
	-4521 Apr 14 j 16:19	0°♄			-4516 Aug 07 j 00:15	0°♄	
	-4521 May 30 j 03:05	0°♄			-4516 Sep 28 j 16:32	0°♄	
asc. node	-4521 Jul 07 j 05:46	24°♄00'38			-4516 Nov 14 j 00:40	0°♄	
	-4521 Jul 17 j 00:35	0°♄			-4516 Dec 29 j 16:33	0°♄	
	-4521 Sep 06 j 13:41	0°♄			-4515 Feb 13 j 22:52	0°♄	
	-4521 Nov 10 j 07:55	0°♄		asc. node	-4515 Feb 25 j 20:44	7°♄38'32	
retrograde	-4521 Dec 15 j 20:24	6°♄31'11			-4515 Apr 01 j 22:48	0°♄	
	-4520 Jan 17 j 10:43	30°♄		evening set	-4515 Apr 29 j 17:13	17°♄36'53	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4515 May 19 j 05:20	0°♄			-4510 Jan 29 j 23:01	0°♂		
max. Earth dist.	-4515 Jun 08 j 00:02	12°♄36'36	2.66604 AU		-4510 Mar 10 j 13:09	0°♂		
					-4510 Apr 21 j 03:12	0°≈		
conjunction	-4515 Jun 15 j 17:42	17°♄33'47	0°54'14		-4510 Jun 05 j 10:07	0°♄		
minimum elong	-4515 Jun 15 j 16:25	17°♄31'44	0°54'23		-4510 Jul 30 j 01:21	0°♄		
	-4515 Jul 05 j 01:21	0°♄		retrograde	-4510 Sep 19 j 18:13	13°♄36'18		
morning rise	-4515 Jul 31 j 01:31	16°♄55'56		asc. node	-4510 Oct 18 j 20:52	7°♄57'04		
	-4515 Aug 19 j 20:51	0°♄		min. Earth dist.	-4510 Oct 27 j 03:37	4°♄44'45	0.64959 AU	
	-4515 Oct 03 j 10:01	0°♄		opposition	-4510 Oct 29 j 19:55	3°♄40'06	0°25'27	
	-4515 Nov 15 j 18:36	0°♄		greatest brilliancy	-4510 Oct 29 j 18:12	3°♄41'50	-1.4m	
	-4515 Dec 28 j 06:26	0°♄			-4510 Nov 08 j 07:33	30°♄♄		
	-4514 Feb 08 j 12:42	0°♄		direct	-4510 Dec 08 j 01:06	24°♄19'19		
desc. node	-4514 Feb 28 j 00:51	13°♄38'35			-4509 Jan 09 j 23:38	0°♄		
	-4514 Mar 24 j 03:52	0°♄			-4509 Mar 17 j 09:51	0°♄		
	-4514 May 14 j 10:59	0°♄			-4509 May 07 j 22:05	0°♄		
retrograde	-4514 Jun 28 j 03:49	11°♄59'55			-4509 Jun 23 j 13:43	0°♄		
min. Earth dist.	-4514 Jul 25 j 15:52	6°♄53'57	0.44535 AU		-4509 Aug 05 j 22:08	0°♄		
greatest brilliancy	-4514 Jul 31 j 12:41	4°♄56'17	-2.4m	evening set	-4509 Sep 03 j 02:13	20°♄31'29		
opposition	-4514 Aug 02 j 15:43	4°♄13'07	-6°-11'-2		-4509 Sep 15 j 18:27	0°♄		
	-4514 Aug 16 j 21:45	30°♄♄		max. Earth dist.	-4509 Sep 28 j 19:16	9°♄52'34	2.39891 AU	
direct	-4514 Sep 03 j 18:19	27°♄52'21		desc. node	-4509 Oct 20 j 19:17	26°♄48'41		
	-4514 Sep 22 j 07:31	0°♄			-4509 Oct 24 j 21:48	0°♄		
	-4514 Dec 01 j 10:43	0°≈						
asc. node	-4513 Jan 13 j 19:21	24°≈48'59		conjunction	-4509 Oct 31 j 12:41	5°♄09'32	0°-7'-45	
	-4513 Jan 22 j 13:08	0°♄		minimum elong	-4509 Oct 31 j 12:02	5°♄08'16	0°07'47	
	-4513 Mar 13 j 03:52	0°♄		behind sun begin	-4509 Oct 30 j 12:28	4°♄22'17		
	-4513 Apr 30 j 15:14	0°♄		behind sun end	-4509 Nov 01 j 11:36	5°♄54'16		
evening set	-4513 Jun 07 j 03:09	23°♄46'15			-4509 Dec 02 j 04:36	0°♄		
	-4513 Jun 16 j 19:07	0°♄		morning rise	-4508 Jan 05 j 13:33	26°♄56'03		
max. Earth dist.	-4513 Jul 02 j 19:40	10°♄26'20	2.61742 AU		-4508 Jan 09 j 12:10	0°♄		
					-4508 Feb 17 j 17:33	0°♄		
conjunction	-4513 Jul 24 j 03:47	24°♄34'08	1°11'13		-4508 Mar 29 j 16:17	0°≈		
minimum elong	-4513 Jul 24 j 03:38	24°♄33'52	1°11'26		-4508 May 12 j 03:27	0°♄		
	-4513 Aug 01 j 05:53	0°♄			-4508 Jun 28 j 06:41	0°♄		
morning rise	-4513 Sep 09 j 07:22	26°♄50'25			-4508 Aug 22 j 03:51	0°♄		
	-4513 Sep 13 j 19:24	0°♄		asc. node	-4508 Sep 04 j 21:43	6°♄05'35		
	-4513 Oct 25 j 14:45	0°♄		retrograde	-4508 Oct 23 j 13:06	17°♄44'01		
	-4513 Dec 05 j 01:25	0°♄		opposition	-4508 Dec 02 j 05:11	8°♄12'28	3°02'37	
	-4512 Jan 13 j 17:14	0°♄		greatest brilliancy	-4508 Dec 02 j 07:06	8°♄10'34	-1.3m	
desc. node	-4512 Jan 15 j 23:22	1°♄42'47		min. Earth dist.	-4508 Dec 03 j 07:11	7°♄46'31	0.67049 AU	
	-4512 Feb 22 j 09:51	0°♄			-4508 Dec 26 j 20:38	30°♄♄		
	-4512 Apr 03 j 09:12	0°♄		direct	-4507 Jan 12 j 01:54	28°♄17'59		
	-4512 May 18 j 00:47	0°≈			-4507 Jan 29 j 07:08	0°♄		
	-4512 Jul 17 j 03:27	0°♄			-4507 Apr 12 j 14:12	0°♄		
retrograde	-4512 Aug 13 j 08:03	4°♄38'26			-4507 Jun 01 j 14:37	0°♄		
	-4512 Sep 08 j 01:22	30°♄♄			-4507 Jul 15 j 23:13	0°♄		
min. Earth dist.	-4512 Sep 15 j 05:01	27°≈22'45	0.56827 AU		-4507 Aug 26 j 01:18	0°♄		
opposition	-4512 Sep 21 j 11:09	24°≈56'12	-2°-55'-4	desc. node	-4507 Sep 06 j 16:02	8°♄47'18		
greatest brilliancy	-4512 Sep 20 j 14:16	25°≈16'36	-1.7m		-4507 Oct 04 j 03:58	0°♄		
direct	-4512 Oct 27 j 17:17	16°≈41'06		evening set	-4507 Nov 03 j 21:33	24°♄06'57		
asc. node	-4512 Nov 30 j 19:43	22°≈53'55			-4507 Nov 11 j 08:50	0°♄		
	-4512 Dec 19 j 14:40	0°♄			-4507 Dec 19 j 15:36	0°♄		
	-4511 Feb 17 j 05:54	0°♄						
	-4511 Apr 09 j 19:08	0°♄		conjunction	-4506 Jan 08 j 08:42	15°♄11'43	-1°-6'-3	
	-4511 May 28 j 02:01	0°♄		minimum elong	-4506 Jan 08 j 07:12	15°♄08'52	1°06'16	
	-4511 Jul 12 j 17:30	0°♄			-4506 Jan 27 j 21:40	0°♄		
evening set	-4511 Jul 16 j 16:54	2°♄41'33		max. Earth dist.	-4506 Feb 26 j 03:42	21°♄35'03	2.44146 AU	
max. Earth dist.	-4511 Aug 02 j 01:05	13°♄54'23	2.52051 AU		-4506 Mar 09 j 20:12	0°≈		
	-4511 Aug 24 j 22:23	0°♄		morning rise	-4506 Mar 13 j 14:45	2°≈41'29		
					-4506 Apr 21 j 23:04	0°♄		
conjunction	-4511 Sep 04 j 23:00	7°♄54'55	0°54'12		-4506 Jun 06 j 13:56	0°♄		
minimum elong	-4511 Sep 05 j 00:50	7°♄58'13	0°54'22	asc. node	-4506 Jul 23 j 21:42	29°♄11'10		
	-4511 Oct 05 j 00:38	0°♄			-4506 Jul 25 j 06:43	0°♄		
morning rise	-4511 Oct 29 j 00:32	18°♄05'42			-4506 Sep 17 j 23:37	0°♄		
	-4511 Nov 13 j 13:45	0°♄		retrograde	-4506 Nov 29 j 14:25	22°♄09'35		
desc. node	-4511 Dec 02 j 22:09	14°♄57'23		opposition	-4505 Jan 06 j 19:41	13°♄26'08	4°49'03	
	-4511 Dec 22 j 06:39	0°♄		greatest brilliancy	-4505 Jan 07 j 19:23	13°♄03'09	-1.4m	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 40

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

min. Earth dist.	-4505 Jan 11 j 17:01	11° Π 32'31	0.62790 AU		-4500 Apr 09 j 00:37	0° Υ	
direct	-4505 Feb 16 j 21:40	3° Π 28'45		evening set	-4500 Apr 14 j 10:32	3° Υ 27'49	
	-4505 May 05 j 19:59	0° Ξ			-4500 May 26 j 01:21	0° Ξ	
	-4505 Jun 23 j 08:41	0° Ω		max. Earth dist.	-4500 May 29 j 19:08	2° Ξ 23'06	2.67084 AU
desc. node	-4505 Jul 25 j 14:20	22° Ω 33'13					
	-4505 Aug 04 j 18:54	0° Π		conjunction	-4500 Jun 01 j 03:30	3° Ξ 52'58	0°41'23
	-4505 Sep 13 j 10:59	0° Ξ		minimum elong	-4500 Jun 01 j 02:16	3° Ξ 51'00	0°41'29
	-4505 Oct 21 j 23:59	0° Π			-4500 Jul 11 j 22:13	0° Π	
	-4505 Nov 29 j 14:25	0° Ξ		morning rise	-4500 Jul 16 j 15:56	3° Π 03'13	
	-4504 Jan 08 j 05:05	0° Ξ			-4500 Aug 27 j 01:45	0° Ξ	
evening set	-4504 Jan 10 j 02:38	1° Ξ 24'31			-4500 Oct 11 j 07:08	0° Ω	
	-4504 Feb 18 j 12:13	0° \approx			-4500 Nov 24 j 18:03	0° Π	
					-4499 Jan 07 j 21:53	0° Ξ	
conjunction	-4504 Mar 08 j 18:45	13° \approx 31'20	0°-49'-21		-4499 Feb 21 j 22:46	0° Π	
minimum elong	-4504 Mar 08 j 20:49	13° \approx 34'55	0°49'30	desc. node	-4499 Mar 16 j 17:20	14° Π 18'16	
	-4504 Apr 01 j 20:05	0° Ξ			-4499 Apr 13 j 18:20	0° Ξ	
max. Earth dist.	-4504 Apr 08 j 21:03	4° Ξ 44'34	2.56513 AU	retrograde	-4499 Jun 04 j 07:31	15° Ξ 04'56	
morning rise	-4504 May 01 j 22:11	20° Ξ 02'45		min. Earth dist.	-4499 Jun 30 j 22:01	10° Ξ 35'58	0.40213 AU
	-4504 May 17 j 04:19	0° Υ		greatest brilliancy	-4499 Jul 05 j 14:27	9° Ξ 12'45	-2.7m
asc. node	-4504 Jun 09 j 19:35	15° Υ 10'34		opposition	-4499 Jul 07 j 08:59	8° Ξ 41'01	-6°-19'-30
	-4504 Jul 03 j 07:51	0° Ξ		direct	-4499 Aug 06 j 19:55	3° Ξ 12'56	
	-4504 Aug 21 j 08:32	0° Π			-4499 Oct 23 j 02:23	0° Ξ	
	-4504 Oct 12 j 22:29	0° Ξ			-4499 Dec 13 j 16:24	0° \approx	
	-4504 Dec 24 j 03:37	0° Ω		asc. node	-4498 Jan 30 j 10:29	29° \approx 20'41	
retrograde	-4503 Jan 13 j 04:05	2° Ω 16'31			-4498 Jan 31 j 11:52	0° Ξ	
	-4503 Feb 01 j 04:36	30° Ξ			-4498 Mar 20 j 18:47	0° Υ	
opposition	-4503 Feb 17 j 15:41	24° Ξ 53'32	5°02'17		-4498 May 07 j 16:01	0° Ξ	
greatest brilliancy	-4503 Feb 19 j 14:40	24° Ξ 11'32	-1.9m	evening set	-4498 May 23 j 04:58	9° Ξ 50'33	
min. Earth dist.	-4503 Feb 25 j 19:21	21° Ξ 59'33	0.52518 AU	max. Earth dist.	-4498 Jun 22 j 20:31	29° Ξ 29'24	2.64284 AU
direct	-4503 Mar 28 j 18:08	15° Ξ 53'09			-4498 Jun 23 j 15:25	0° Π	
	-4503 May 18 j 14:36	0° Ω					
desc. node	-4503 Jun 11 j 14:28	13° Ω 00'24		conjunction	-4498 Jul 08 j 21:22	9° Π 55'34	1°07'51
	-4503 Jul 08 j 08:53	0° Π		minimum elong	-4498 Jul 08 j 20:35	9° Π 54'16	1°08'03
	-4503 Aug 19 j 16:38	0° Ξ			-4498 Aug 08 j 04:34	0° Ξ	
	-4503 Sep 28 j 15:57	0° Π		morning rise	-4498 Aug 23 j 20:23	10° Ξ 34'27	
	-4503 Nov 07 j 07:55	0° Ξ			-4498 Sep 21 j 01:40	0° Ω	
	-4503 Dec 17 j 20:49	0° Ξ			-4498 Nov 02 j 08:47	0° Π	
	-4502 Jan 28 j 23:31	0° \approx			-4498 Dec 13 j 09:48	0° Ξ	
evening set	-4502 Mar 03 j 11:37	22° \approx 58'34			-4497 Jan 22 j 17:51	0° Π	
	-4502 Mar 13 j 22:34	0° Ξ		desc. node	-4497 Feb 01 j 18:18	7° Π 28'01	
					-4497 Mar 04 j 06:12	0° Ξ	
conjunction	-4502 Apr 23 j 21:52	26° Ξ 58'32	0°-2'-10		-4497 Apr 15 j 15:39	0° Ξ	
minimum elong	-4502 Apr 23 j 21:59	26° Ξ 58'43	0°02'12		-4497 Jun 03 j 20:59	0° \approx	
behind sun begin	-4502 Apr 23 j 01:37	26° Ξ 25'40		retrograde	-4497 Jul 28 j 17:34	16° \approx 41'54	
behind sun end	-4502 Apr 24 j 18:21	27° Ξ 31'46		min. Earth dist.	-4497 Aug 28 j 11:47	10° \approx 14'43	0.52257 AU
asc. node	-4502 Apr 27 j 15:44	29° Ξ 24'19		greatest brilliancy	-4497 Sep 03 j 10:22	8° \approx 00'28	-2.0m
	-4502 Apr 28 j 13:46	0° Υ		opposition	-4497 Sep 04 j 21:46	7° \approx 27'02	-4°-19'-54
max. Earth dist.	-4502 May 06 j 12:28	5° Υ 08'12	2.64469 AU		-4497 Oct 04 j 15:12	30° Ξ	
morning rise	-4502 Jun 10 j 23:58	27° Υ 51'35		direct	-4497 Oct 09 j 14:58	29° Ξ 50'05	
	-4502 Jun 14 j 08:41	0° Ξ			-4497 Oct 14 j 17:24	0° \approx	
	-4502 Jul 31 j 17:39	0° Π		asc. node	-4497 Dec 18 j 09:35	21° \approx 09'03	
	-4502 Sep 17 j 11:50	0° Ξ			-4496 Jan 04 j 20:39	0° Ξ	
	-4502 Nov 05 j 05:04	0° Ω			-4496 Feb 27 j 11:26	0° Υ	
	-4502 Dec 27 j 08:28	0° Π			-4496 Apr 17 j 10:55	0° Ξ	
retrograde	-4501 Mar 19 j 09:26	28° Π 07'53			-4496 Jun 04 j 04:27	0° Π	
opposition	-4501 Apr 19 j 16:29	22° Π 44'04	0°42'40	evening set	-4496 Jun 30 j 09:36	17° Π 05'40	
greatest brilliancy	-4501 Apr 19 j 23:12	22° Π 39'14	-2.7m		-4496 Jul 19 j 16:58	0° Ξ	
min. Earth dist.	-4501 Apr 25 j 09:08	21° Π 06'22	0.40145 AU	max. Earth dist.	-4496 Jul 19 j 17:03	0° Ξ 00'08	2.56362 AU
desc. node	-4501 Apr 29 j 14:55	19° Π 57'18					
direct	-4501 May 22 j 15:23	16° Π 36'14		conjunction	-4496 Aug 17 j 21:08	20° Ξ 02'46	1°05'49
	-4501 Jul 09 j 20:43	0° Ξ		minimum elong	-4496 Aug 17 j 22:16	20° Ξ 04'45	1°06'01
	-4501 Aug 29 j 17:04	0° Π			-4496 Sep 01 j 00:21	0° Ω	
	-4501 Oct 12 j 20:56	0° Ξ		morning rise	-4496 Oct 07 j 09:54	26° Ω 21'04	
	-4501 Nov 25 j 04:44	0° Ξ			-4496 Oct 12 j 08:21	0° Π	
	-4500 Jan 08 j 06:14	0° \approx			-4496 Nov 21 j 04:35	0° Ξ	
	-4500 Feb 22 j 13:45	0° Ξ		desc. node	-4496 Dec 19 j 15:59	21° Ξ 52'11	
asc. node	-4500 Mar 14 j 12:41	13° Ξ 36'31			-4496 Dec 30 j 04:46	0° Π	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4495 Feb 07 j 04:00	0°♊			-4490 May 17 j 07:42	0°♉		
	-4495 Mar 19 j 01:59	0°♈			-4490 Jul 02 j 11:08	0°♌		
	-4495 Apr 30 j 07:02	0°♉		desc. node	-4490 Aug 11 j 07:50	28°♌37'42		
	-4495 Jun 16 j 12:28	0°♊			-4490 Aug 13 j 04:05	0°♍		
retrograde	-4495 Sep 05 j 20:16	29°♊33'25			-4490 Sep 21 j 12:44	0°♎		
min. Earth dist.	-4495 Oct 11 j 14:35	21°♊15'22	0.62432 AU		-4490 Oct 29 j 21:05	0°♏		
opposition	-4495 Oct 15 j 17:46	19°♊36'10	0°-47'-26		-4490 Dec 07 j 07:07	0°♐		
greatest brilliancy	-4495 Oct 15 j 13:50	19°♊40'06	-1.5m	evening set	-4490 Dec 16 j 02:23	6°♐47'23		
asc. node	-4495 Nov 04 j 10:44	12°♊52'00			-4489 Jan 15 j 16:53	0°♑		
direct	-4495 Nov 22 j 23:09	10°♊36'37						
	-4494 Jan 29 j 03:10	0°♒		conjunction	-4489 Feb 16 j 07:04	23°♑11'24	-1°-2'-42	
	-4494 Mar 26 j 22:04	0°♓		minimum elong	-4489 Feb 16 j 08:52	23°♑14'39	1°02'55	
	-4494 May 15 j 18:05	0°♈			-4489 Feb 25 j 19:08	0°♉		
	-4494 Jun 30 j 21:39	0°♊		max. Earth dist.	-4489 Mar 27 j 12:20	20°♉48'35	2.52059 AU	
evening set	-4494 Aug 13 j 21:44	0°♌32'27			-4489 Apr 09 j 23:16	0°♊		
	-4494 Aug 13 j 03:34	0°♌		morning rise	-4489 Apr 15 j 01:21	3°♊26'13		
max. Earth dist.	-4494 Aug 29 j 22:09	12°♌07'18	2.44519 AU		-4489 May 25 j 07:43	0°♒		
	-4494 Sep 23 j 01:26	0°♍		asc. node	-4489 Jun 27 j 11:28	21°♒04'50		
					-4489 Jul 11 j 20:22	0°♓		
conjunction	-4494 Oct 07 j 12:06	10°♍55'16	0°21'07		-4489 Aug 31 j 04:59	0°♈		
minimum elong	-4494 Oct 07 j 13:30	10°♍57'55	0°21'11		-4489 Oct 27 j 23:33	0°♊		
	-4494 Nov 01 j 07:44	0°♎		retrograde	-4489 Dec 25 j 20:08	15°♊40'26		
desc. node	-4494 Nov 06 j 12:53	4°♎02'51		opposition	-4488 Jan 31 j 14:05	7°♊40'53	5°14'35	
morning rise	-4494 Dec 07 j 23:31	28°♎37'28		greatest brilliancy	-4488 Feb 02 j 06:05	7°♊03'33	-1.7m	
	-4494 Dec 09 j 17:38	0°♏		min. Earth dist.	-4488 Feb 07 j 15:59	5°♊03'01	0.57156 AU	
	-4493 Jan 17 j 03:36	0°♐			-4488 Feb 24 j 02:57	30°♒♈		
	-4493 Feb 25 j 10:48	0°♑		direct	-4488 Mar 11 j 19:55	28°♒07'20		
	-4493 Apr 07 j 12:38	0°♒			-4488 Mar 29 j 04:56	0°♉		
	-4493 May 21 j 09:15	0°♓			-4488 Jun 04 j 08:29	0°♌		
	-4493 Jul 08 j 22:48	0°♈		desc. node	-4488 Jun 28 j 06:46	15°♌17'12		
	-4493 Sep 11 j 13:04	0°♊			-4488 Jul 19 j 14:40	0°♍		
asc. node	-4493 Sep 22 j 13:07	2°♊49'14			-4488 Aug 29 j 09:08	0°♎		
retrograde	-4493 Oct 11 j 00:20	4°♊50'56			-4488 Oct 07 j 13:27	0°♏		
	-4493 Nov 07 j 04:10	30°♒♒			-4488 Nov 15 j 15:54	0°♐		
opposition	-4493 Nov 19 j 23:23	25°♒06'53	2°07'06		-4488 Dec 25 j 17:21	0°♑		
greatest brilliancy	-4493 Nov 19 j 21:04	25°♒09'12	-1.3m		-4487 Feb 05 j 10:18	0°♒		
min. Earth dist.	-4493 Nov 19 j 13:52	25°♒16'26	0.66973 AU	evening set	-4487 Feb 12 j 09:09	4°♒52'19		
direct	-4493 Dec 30 j 08:35	15°♒22'21			-4487 Mar 21 j 01:33	0°♓		
	-4492 Feb 24 j 23:07	0°♈						
	-4492 Apr 22 j 15:36	0°♊		conjunction	-4487 Apr 07 j 04:19	11°♊25'30	0°-21'-7	
	-4492 Jun 09 j 20:44	0°♌		minimum elong	-4487 Apr 07 j 05:16	11°♊27'05	0°21'12	
	-4492 Jul 23 j 16:47	0°♍		max. Earth dist.	-4487 Apr 26 j 14:21	24°♊11'47	2.61973 AU	
	-4492 Sep 02 j 15:20	0°♎			-4487 May 05 j 12:19	0°♏		
desc. node	-4492 Sep 23 j 10:13	15°♎49'32		asc. node	-4487 May 14 j 08:38	5°♒43'36		
evening set	-4492 Oct 08 j 14:50	27°♎35'05		morning rise	-4487 May 27 j 03:11	13°♒56'26		
	-4492 Oct 11 j 17:15	0°♏			-4487 Jun 21 j 08:14	0°♐		
	-4492 Nov 18 j 21:55	0°♐			-4487 Aug 08 j 03:50	0°♒		
					-4487 Sep 26 j 03:21	0°♈		
conjunction	-4492 Dec 11 j 20:33	18°♒02'47	0°-51'-18		-4487 Nov 17 j 01:34	0°♌		
minimum elong	-4492 Dec 11 j 17:14	17°♒56'17	0°51'26		-4486 Jan 24 j 07:39	0°♍		
	-4492 Dec 27 j 03:55	0°♐		retrograde	-4486 Feb 18 j 19:41	3°♍36'12		
max. Earth dist.	-4491 Jan 22 j 11:30	20°♐15'42	2.39278 AU		-4486 Mar 15 j 03:06	30°♒♌		
	-4491 Feb 04 j 08:25	0°♑		opposition	-4486 Mar 23 j 16:39	27°♌25'06	3°17'04	
morning rise	-4491 Feb 17 j 06:04	9°♑37'32		greatest brilliancy	-4486 Mar 25 j 04:55	26°♌56'06	-2.4m	
	-4491 Mar 17 j 05:31	0°♒		min. Earth dist.	-4486 Mar 31 j 19:08	24°♌50'24	0.44555 AU	
	-4491 Apr 29 j 09:04	0°♓		direct	-4486 Apr 28 j 15:49	19°♌56'35		
	-4491 Jun 14 j 08:12	0°♈		desc. node	-4486 May 16 j 08:40	22°♌02'37		
	-4491 Aug 03 j 08:59	0°♊			-4486 Jun 08 j 13:54	0°♍		
asc. node	-4491 Aug 09 j 13:12	3°♊26'55			-4486 Jul 30 j 23:04	0°♎		
	-4491 Oct 04 j 06:12	0°♌			-4486 Sep 12 j 01:18	0°♏		
retrograde	-4491 Nov 14 j 14:40	8°♌37'16			-4486 Oct 23 j 11:36	0°♐		
	-4491 Dec 22 j 08:28	30°♒♓			-4486 Dec 04 j 06:17	0°♑		
opposition	-4491 Dec 23 j 12:53	29°♓32'05	4°14'58		-4485 Jan 16 j 07:34	0°♒		
greatest brilliancy	-4491 Dec 24 j 02:37	29°♓18'35	-1.3m		-4485 Mar 01 j 22:55	0°♓		
min. Earth dist.	-4491 Dec 26 j 22:37	28°♓11'44	0.65212 AU	evening set	-4485 Mar 30 j 13:07	18°♓42'56		
direct	-4490 Feb 02 j 17:36	19°♓31'21		asc. node	-4485 Apr 01 j 04:30	19°♓46'48		
	-4490 Mar 20 j 09:25	0°♈			-4485 Apr 17 j 00:04	0°♉		

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 42

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

conjunction	-4485 May 18 j 08:28	20°Υ05'48	0°26'00	min. Earth dist.	-4480 Sep 25 j 03:48	6°Ϡ45'06	0.59051 AU
minimum elong	-4485 May 18 j 07:33	20°Υ04'20	0°26'02	opposition	-4480 Sep 30 j 16:39	4°Ϡ33'57	-2°-6'-53
max. Earth dist.	-4485 May 21 j 11:42	22°Υ05'56	2.66715 AU	greatest brilliancy	-4480 Sep 30 j 03:01	4°Ϡ47'25	-1.6m
	-4485 Jun 02 j 20:55	0°Ϡ			-4480 Oct 13 j 05:01	30°Ϡ	
morning rise	-4485 Jul 03 j 12:23	19°Ϡ33'02		direct	-4480 Nov 06 j 17:26	26°≈01'02	
	-4485 Jul 19 j 20:29	0°Π		asc. node	-4480 Nov 21 j 01:57	27°≈14'46	
	-4485 Sep 04 j 11:11	0°Ϡ			-4480 Dec 03 j 12:19	0°Ϡ	
	-4485 Oct 20 j 15:24	0°Ω			-4479 Feb 10 j 12:09	0°Υ	
	-4485 Dec 05 j 19:23	0°Ϡ			-4479 Apr 04 j 10:56	0°Ϡ	
	-4484 Jan 22 j 03:24	0°Ω			-4479 May 23 j 05:25	0°Π	
	-4484 Mar 15 j 12:50	0°Ϡ			-4479 Jul 08 j 01:18	0°Ϡ	
desc. node	-4484 Apr 02 j 10:29	7°Ϡ39'17		evening set	-4479 Jul 26 j 13:21	12°Ϡ37'59	
retrograde	-4484 May 06 j 17:01	14°Ϡ35'42		max. Earth dist.	-4479 Aug 10 j 22:09	23°Ϡ21'36	2.49451 AU
min. Earth dist.	-4484 Jun 04 j 13:31	9°Ϡ53'34	0.37840 AU		-4479 Aug 20 j 06:52	0°Ω	
opposition	-4484 Jun 06 j 16:34	9°Ϡ19'03	-4°-36'-53				
greatest brilliancy	-4484 Jun 06 j 03:43	9°Ϡ27'45	-2.9m	conjunction	-4479 Sep 16 j 02:36	19°Ω26'44	0°44'14
direct	-4484 Jul 06 j 14:49	4°Ϡ18'54		minimum elong	-4479 Sep 16 j 04:35	19°Ω30'23	0°44'21
	-4484 Sep 17 j 23:42	0°Ϡ			-4479 Sep 30 j 08:04	0°Ϡ	
	-4484 Nov 06 j 18:54	0°Ϡ			-4479 Nov 08 j 18:56	0°Ω	
	-4484 Dec 23 j 19:25	0°≈		morning rise	-4479 Nov 11 j 13:48	2°Ω09'02	
	-4483 Feb 08 j 18:06	0°Ϡ		desc. node	-4479 Nov 23 j 07:28	11°Ω14'28	
asc. node	-4483 Feb 16 j 01:47	4°Ϡ39'04			-4479 Dec 17 j 09:17	0°Ϡ	
	-4483 Mar 28 j 03:04	0°Υ			-4478 Jan 24 j 22:55	0°Ϡ	
evening set	-4483 May 08 j 08:14	26°Υ02'36			-4478 Mar 05 j 09:22	0°Ϡ	
	-4483 May 14 j 14:03	0°Ϡ			-4478 Apr 15 j 16:53	0°≈	
max. Earth dist.	-4483 Jun 13 j 10:47	19°Ϡ02'29	2.66009 AU		-4478 May 30 j 06:05	0°Ϡ	
					-4478 Jul 20 j 13:50	0°Υ	
conjunction	-4483 Jun 24 j 03:02	25°Ϡ54'27	1°00'18	retrograde	-4478 Sep 27 j 13:28	21°Υ45'15	
minimum elong	-4483 Jun 24 j 01:51	25°Ϡ52'33	1°00'27	asc. node	-4478 Oct 09 j 03:19	20°Υ50'58	
	-4483 Jun 30 j 11:05	0°Π		min. Earth dist.	-4478 Nov 04 j 18:40	12°Υ37'19	0.65939 AU
morning rise	-4483 Aug 08 j 12:37	25°Π34'38		opposition	-4478 Nov 06 j 15:35	11°Υ52'09	1°04'48
	-4483 Aug 15 j 04:17	0°Ϡ		greatest brilliancy	-4478 Nov 06 j 12:25	11°Υ55'20	-1.3m
	-4483 Sep 28 j 11:12	0°Ω		direct	-4478 Dec 16 j 08:21	2°Υ21'37	
	-4483 Nov 10 j 09:36	0°Ϡ			-4477 Mar 10 j 09:23	0°Ϡ	
	-4483 Dec 22 j 06:34	0°Ω			-4477 May 02 j 12:02	0°Π	
	-4482 Feb 01 j 15:50	0°Ϡ			-4477 Jun 18 j 15:33	0°Ϡ	
desc. node	-4482 Feb 18 j 10:49	12°Ϡ06'45			-4477 Aug 01 j 03:56	0°Ω	
	-4482 Mar 15 j 16:53	0°Ϡ			-4477 Sep 11 j 01:13	0°Ϡ	
	-4482 Apr 30 j 13:22	0°Ϡ		evening set	-4477 Sep 15 j 14:53	3°Ϡ26'55	
retrograde	-4482 Jul 09 j 23:26	25°Ϡ49'21		desc. node	-4477 Oct 11 j 03:51	23°Ϡ00'22	
min. Earth dist.	-4482 Aug 07 j 14:15	20°Ϡ14'42	0.47281 AU		-4477 Oct 20 j 04:01	0°Ω	
greatest brilliancy	-4482 Aug 13 j 15:30	18°Ϡ06'30	-2.2m	max. Earth dist.	-4477 Oct 28 j 12:30	6°Ω31'07	2.38029 AU
opposition	-4482 Aug 15 j 15:25	17°Ϡ23'53	-5°-38'-18				
direct	-4482 Sep 17 j 15:49	10°Ϡ33'48		conjunction	-4477 Nov 15 j 08:37	20°Ω30'51	0°-25'-1
	-4482 Nov 21 j 14:06	0°≈		minimum elong	-4477 Nov 15 j 06:31	20°Ω26'43	0°25'05
asc. node	-4481 Jan 04 j 01:22	23°≈04'40			-4477 Nov 27 j 09:55	0°Ϡ	
	-4481 Jan 16 j 04:23	0°Ϡ			-4476 Jan 04 j 16:38	0°Ϡ	
	-4481 Mar 07 j 21:07	0°Υ		morning rise	-4476 Jan 21 j 21:20	13°Ϡ17'22	
	-4481 Apr 25 j 19:25	0°Ϡ			-4476 Feb 12 j 21:00	0°Ϡ	
	-4481 Jun 12 j 03:51	0°Π			-4476 Mar 24 j 18:08	0°≈	
evening set	-4481 Jun 15 j 20:08	2°Π22'41			-4476 May 07 j 00:45	0°Ϡ	
max. Earth dist.	-4481 Jul 09 j 01:37	17°Π35'10	2.60038 AU		-4476 Jun 22 j 13:51	0°Υ	
	-4481 Jul 27 j 15:37	0°Ϡ			-4476 Aug 13 j 22:55	0°Ϡ	
				asc. node	-4476 Aug 26 j 04:40	6°Ϡ07'19	
conjunction	-4481 Aug 02 j 05:21	3°Ϡ46'10	1°10'53	retrograde	-4476 Oct 31 j 09:53	25°Ϡ32'51	
minimum elong	-4481 Aug 02 j 05:38	3°Ϡ46'39	1°11'07	opposition	-4476 Dec 09 j 21:12	16°Ϡ09'43	3°31'25
	-4481 Sep 09 j 03:12	0°Ω		greatest brilliancy	-4476 Dec 10 j 02:42	16°Ϡ04'15	-1.3m
morning rise	-4481 Sep 19 j 07:38	7°Ω13'24		min. Earth dist.	-4476 Dec 11 j 19:01	15°Ϡ24'12	0.66680 AU
	-4481 Oct 20 j 18:40	0°Ϡ		direct	-4475 Jan 19 j 22:55	6°Ϡ11'32	
	-4481 Nov 29 j 23:47	0°Ω			-4475 Apr 05 j 02:08	0°Π	
desc. node	-4480 Jan 06 j 09:58	28°Ω29'46			-4475 May 26 j 23:24	0°Ϡ	
	-4480 Jan 08 j 09:10	0°Ϡ			-4475 Jul 10 j 20:48	0°Ω	
	-4480 Feb 16 j 17:58	0°Ϡ			-4475 Aug 21 j 03:45	0°Ϡ	
	-4480 Mar 28 j 04:45	0°Ϡ		desc. node	-4475 Aug 28 j 02:12	5°Ϡ13'20	
	-4480 May 10 j 13:56	0°≈			-4475 Sep 29 j 08:06	0°Ω	
	-4480 Jul 01 j 11:23	0°Ϡ			-4475 Nov 06 j 13:38	0°Ϡ	
retrograde	-4480 Aug 22 j 04:47	14°Ϡ24'38		evening set	-4475 Nov 19 j 06:49	10°Ϡ00'12	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 43

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

greatest brilliancy	-4475 Nov 29 j 03:53	17° \mathbb{M} 45'11	1.2m			-4470 Jun 09 j 17:21	0° \mathcal{B}	
	-4475 Dec 14 j 20:49	0° \mathcal{A}		morning rise		-4470 Jun 19 j 07:31	6° \mathcal{B} 06'19	
						-4470 Jul 26 j 22:05	0° \mathbb{I}	
conjunction	-4474 Jan 23 j 05:08	0° \mathcal{B} 03'41	-1°-8'-10			-4470 Sep 12 j 04:34	0° \mathcal{E}	
minimum elong	-4474 Jan 23 j 05:10	0° \mathcal{B} 03'45	1°08'23			-4470 Oct 29 j 18:34	0° \mathcal{Q}	
	-4474 Jan 23 j 03:10	0° \mathcal{B}				-4470 Dec 17 j 21:47	0° \mathbb{M}	
	-4474 Mar 05 j 01:57	0° \approx				-4469 Feb 11 j 18:58	0° \mathcal{L}	
max. Earth dist.	-4474 Mar 10 j 19:03	4° \approx 04'07	2.47057 AU	retrograde		-4469 Apr 06 j 03:31	14° \mathcal{L} 13'21	
morning rise	-4474 Mar 26 j 03:44	14° \approx 52'20		desc. node		-4469 Apr 20 j 02:08	13° \mathcal{L} 01'01	
	-4474 Apr 17 j 04:03	0° \mathcal{H}		opposition		-4469 May 06 j 16:49	9° \mathcal{L} 07'17	-1°-14'-23
	-4474 Jun 01 j 14:58	0° \mathcal{Y}		greatest brilliancy		-4469 May 06 j 21:21	9° \mathcal{L} 04'12	-2.8m
asc. node	-4474 Jul 14 j 03:03	26° \mathcal{Y} 35'35		min. Earth dist.		-4469 May 10 j 01:21	8° \mathcal{L} 12'41	0.38505 AU
	-4474 Jul 19 j 18:08	0° \mathcal{B}		direct		-4469 Jun 07 j 02:31	3° \mathcal{L} 38'28	
	-4474 Sep 10 j 07:20	0° \mathbb{I}				-4469 Aug 18 j 19:28	0° \mathbb{M}	
	-4474 Nov 28 j 00:07	0° \mathcal{E}				-4469 Oct 05 j 06:23	0° \mathcal{A}	
retrograde	-4474 Dec 08 j 16:19	0° \mathcal{E} 40'45				-4469 Nov 18 j 23:36	0° \mathcal{B}	
	-4474 Dec 19 j 00:01	30° \mathbb{R} \mathbb{I}				-4468 Jan 02 j 19:28	0° \approx	
opposition	-4473 Jan 15 j 10:54	22° \mathbb{I} 11'21	5°02'49			-4468 Feb 17 j 13:55	0° \mathcal{H}	
greatest brilliancy	-4473 Jan 16 j 16:33	21° \mathbb{I} 42'56	-1.5m	asc. node		-4468 Mar 04 j 18:02	10° \mathcal{H} 26'28	
min. Earth dist.	-4473 Jan 21 j 03:49	20° \mathbb{I} 00'25	0.61052 AU			-4468 Apr 04 j 07:11	0° \mathcal{Y}	
direct	-4473 Feb 25 j 08:47	12° \mathbb{I} 19'27		evening set		-4468 Apr 23 j 06:39	12° \mathcal{Y} 05'02	
	-4473 Apr 26 j 17:43	0° \mathcal{E}				-4468 May 21 j 10:43	0° \mathcal{B}	
	-4473 Jun 17 j 01:41	0° \mathcal{Q}		max. Earth dist.		-4468 Jun 04 j 04:52	8° \mathcal{B} 46'03	2.66921 AU
desc. node	-4473 Jul 16 j 01:09	19° \mathcal{Q} 47'27						
	-4473 Jul 30 j 06:04	0° \mathbb{M}		conjunction		-4468 Jun 09 j 13:16	12° \mathcal{B} 11'05	0°49'12
	-4473 Sep 08 j 05:41	0° \mathcal{L}		minimum elong		-4468 Jun 09 j 11:58	12° \mathcal{B} 09'01	0°49'19
	-4473 Oct 16 j 22:56	0° \mathbb{M}				-4468 Jul 07 j 07:14	0° \mathbb{I}	
	-4473 Nov 24 j 16:27	0° \mathcal{A}		morning rise		-4468 Jul 24 j 21:45	11° \mathbb{I} 24'19	
	-4472 Jan 03 j 09:29	0° \mathcal{B}				-4468 Aug 22 j 06:38	0° \mathcal{E}	
evening set	-4472 Jan 23 j 04:14	14° \mathcal{B} 30'44				-4468 Oct 06 j 03:02	0° \mathcal{Q}	
	-4472 Feb 13 j 18:39	0° \approx				-4468 Nov 18 j 22:52	0° \mathbb{M}	
						-4467 Jan 01 j 02:16	0° \mathcal{L}	
conjunction	-4472 Mar 19 j 23:57	24° \approx 27'45	0°-39'-36			-4467 Feb 13 j 07:53	0° \mathbb{M}	
minimum elong	-4472 Mar 20 j 01:44	24° \approx 30'47	0°39'43	desc. node		-4467 Mar 07 j 04:06	14° \mathbb{M} 45'32	
	-4472 Mar 28 j 03:46	0° \mathcal{H}				-4467 Mar 30 j 21:13	0° \mathcal{A}	
max. Earth dist.	-4472 Apr 15 j 20:27	12° \mathcal{H} 31'09	2.58662 AU			-4467 Jun 05 j 04:56	0° \mathcal{B}	
morning rise	-4472 May 11 j 11:09	29° \mathcal{H} 20'10		retrograde		-4467 Jun 18 j 07:39	1° \mathcal{B} 11'46	
	-4472 May 12 j 11:41	0° \mathcal{Y}				-4467 Jul 01 j 04:24	30° \mathbb{R} \mathcal{A}	
asc. node	-4472 May 30 j 23:51	11° \mathcal{Y} 56'08		min. Earth dist.		-4467 Jul 15 j 04:47	26° \mathcal{A} 25'37	0.42442 AU
	-4472 Jun 28 j 11:00	0° \mathcal{B}		greatest brilliancy		-4467 Jul 20 j 16:30	24° \mathcal{A} 41'03	-2.5m
	-4472 Aug 15 j 22:31	0° \mathbb{I}		opposition		-4467 Jul 22 j 18:19	24° \mathcal{A} 00'59	-6°-25'-10
	-4472 Oct 05 j 19:31	0° \mathcal{E}		direct		-4467 Aug 23 j 02:45	18° \mathcal{A} 04'39	
	-4472 Dec 03 j 19:06	0° \mathcal{Q}				-4467 Oct 09 j 17:00	0° \mathcal{B}	
retrograde	-4471 Jan 25 j 10:38	13° \mathcal{Q} 04'59				-4467 Dec 06 j 08:09	0° \approx	
opposition	-4471 Mar 01 j 01:19	6° \mathcal{Q} 05'56	4°38'43	asc. node		-4466 Jan 20 j 16:06	26° \approx 54'44	
greatest brilliancy	-4471 Mar 03 j 00:42	5° \mathcal{Q} 24'57	-2.1m			-4466 Jan 25 j 18:18	0° \mathcal{H}	
min. Earth dist.	-4471 Mar 09 j 12:46	3° \mathcal{Q} 10'49	0.49705 AU			-4466 Mar 15 j 17:44	0° \mathcal{Y}	
	-4471 Mar 20 j 04:11	30° \mathbb{R} \mathcal{E}				-4466 May 02 j 22:38	0° \mathcal{B}	
direct	-4471 Apr 08 j 06:25	27° \mathcal{E} 32'14		evening set		-4466 May 31 j 18:04	18° \mathcal{B} 14'43	
	-4471 Apr 27 j 17:33	0° \mathcal{Q}				-4466 Jun 19 j 01:01	0° \mathbb{I}	
desc. node	-4471 Jun 02 j 00:36	13° \mathcal{Q} 54'00		max. Earth dist.		-4466 Jun 28 j 14:52	6° \mathbb{I} 13'03	2.62970 AU
	-4471 Jun 29 j 22:49	0° \mathbb{M}						
	-4471 Aug 13 j 00:32	0° \mathcal{L}		conjunction		-4466 Jul 17 j 13:35	18° \mathbb{I} 39'36	1°10'21
	-4471 Sep 22 j 17:34	0° \mathbb{M}		minimum elong		-4466 Jul 17 j 13:07	18° \mathbb{I} 38'51	1°10'34
	-4471 Nov 01 j 20:34	0° \mathcal{A}				-4466 Aug 03 j 13:40	0° \mathcal{E}	
	-4471 Dec 12 j 17:20	0° \mathcal{B}		morning rise		-4466 Sep 02 j 02:29	20° \mathcal{E} 07'29	
	-4470 Jan 24 j 02:01	0° \approx				-4466 Sep 16 j 07:13	0° \mathcal{Q}	
	-4470 Mar 09 j 05:13	0° \mathcal{H}				-4466 Oct 28 j 08:23	0° \mathbb{M}	
evening set	-4470 Mar 13 j 15:55	2° \mathcal{H} 57'33				-4466 Dec 08 j 01:31	0° \mathcal{L}	
asc. node	-4470 Apr 17 j 21:12	26° \mathcal{H} 04'15				-4465 Jan 17 j 00:05	0° \mathbb{M}	
	-4470 Apr 23 j 22:44	0° \mathcal{Y}		desc. node		-4465 Jan 23 j 02:48	4° \mathbb{M} 36'22	
						-4465 Feb 26 j 00:04	0° \mathcal{A}	
conjunction	-4470 May 03 j 00:48	5° \mathcal{Y} 52'04	0°08'37			-4465 Apr 08 j 10:09	0° \mathcal{B}	
minimum elong	-4470 May 03 j 00:28	5° \mathcal{Y} 51'30	0°08'37			-4465 May 24 j 08:04	0° \approx	
behind sun begin	-4470 May 02 j 07:19	5° \mathcal{Y} 23'54		retrograde		-4465 Aug 07 j 10:02	27° \approx 38'04	
behind sun end	-4470 May 03 j 17:36	6° \mathcal{Y} 19'05		min. Earth dist.		-4465 Sep 08 j 08:41	20° \approx 43'42	0.54860 AU
max. Earth dist.	-4470 May 12 j 04:19	11° \mathcal{Y} 45'03	2.65486 AU	greatest brilliancy		-4465 Sep 14 j 01:35	18° \approx 32'03	-1.8m

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 44

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

opposition	-4465 Sep 15 j 04:34	18° \approx 06'02	-3°-31'-15			-4460 Oct 06 j 22:51	0° Ω	
direct	-4465 Oct 20 j 19:23	10° \approx 06'55		evening set		-4460 Oct 23 j 04:48	12° Ω 42'57	
asc. node	-4465 Dec 08 j 16:23	21° \approx 51'55				-4460 Nov 14 j 03:42	0° \mathbb{M}	
	-4465 Dec 27 j 00:21	0° \mathbb{X}				-4460 Dec 22 j 09:47	0° \mathbb{X}	
	-4464 Feb 21 j 13:05	0° \mathbb{Y}						
	-4464 Apr 12 j 09:13	0° \mathbb{X}		conjunction		-4460 Dec 27 j 11:46	3° \mathbb{X} 56'44	-1°-1'-21
	-4464 May 30 j 10:59	0° \mathbb{I}		minimum elong		-4460 Dec 27 j 09:12	3° \mathbb{X} 51'45	1°01'32
evening set	-4464 Jul 09 j 14:06	26° \mathbb{I} 17'32				-4459 Jan 30 j 14:12	0° \mathbb{Z}	
	-4464 Jul 15 j 02:22	0° \mathbb{S}		max. Earth dist.		-4459 Feb 13 j 20:34	10° \mathbb{Z} 38'24	2.41835 AU
max. Earth dist.	-4464 Jul 27 j 00:24	8° \mathbb{S} 06'15	2.54053 AU	morning rise		-4459 Mar 03 j 10:03	23° \mathbb{Z} 29'54	
						-4459 Mar 12 j 10:41	0° \approx	
conjunction	-4464 Aug 27 j 22:54	0° \mathbb{Q} 24'02	1°00'01			-4459 Apr 24 j 12:10	0° \mathbb{X}	
minimum elong	-4464 Aug 28 j 00:28	0° \mathbb{Q} 26'50	1°00'12			-4459 Jun 09 j 04:22	0° \mathbb{Y}	
	-4464 Aug 27 j 09:23	0° \mathbb{Q}				-4459 Jul 28 j 06:48	0° \mathbb{X}	
	-4464 Oct 07 j 15:05	0° \mathbb{M}		asc. node		-4459 Jul 30 j 18:29	1° \mathbb{X} 26'38	
morning rise	-4464 Oct 19 j 07:17	8° \mathbb{M} 43'31				-4459 Sep 22 j 23:46	0° \mathbb{I}	
	-4464 Nov 16 j 07:44	0° Ω		retrograde		-4459 Nov 23 j 01:23	16° \mathbb{I} 44'41	
desc. node	-4464 Dec 10 j 01:31	18° Ω 17'51		opposition		-4459 Dec 31 j 15:26	7° \mathbb{I} 50'55	4°35'45
	-4464 Dec 25 j 03:46	0° \mathbb{M}		greatest brilliancy		-4458 Jan 01 j 10:34	7° \mathbb{I} 32'14	-1.4m
	-4463 Feb 01 j 22:40	0° \mathbb{X}		min. Earth dist.		-4458 Jan 04 j 21:14	6° \mathbb{I} 11'41	0.64004 AU
	-4463 Mar 13 j 14:53	0° \mathbb{Z}				-4458 Jan 23 j 17:17	30° \mathbb{R} \mathbb{X}	
	-4463 Apr 24 j 08:54	0° \approx		direct		-4458 Feb 10 j 20:16	27° \mathbb{X} 51'04	
	-4463 Jun 09 j 05:01	0° \mathbb{X}				-4458 Mar 01 j 23:25	0° \mathbb{I}	
	-4463 Aug 06 j 13:24	0° \mathbb{Y}				-4458 May 10 j 09:13	0° \mathbb{S}	
retrograde	-4463 Sep 13 j 21:51	8° \mathbb{Y} 09'51				-4458 Jun 26 j 19:34	0° \mathbb{Q}	
	-4463 Oct 19 j 11:15	30° \mathbb{R} \mathbb{X}		desc. node		-4458 Aug 01 j 17:48	25° \mathbb{Q} 25'42	
min. Earth dist.	-4463 Oct 20 j 14:47	29° \mathbb{X} 32'32	0.63955 AU			-4458 Aug 07 j 22:52	0° \mathbb{M}	
opposition	-4463 Oct 23 j 22:35	28° \mathbb{X} 12'30	0°-4'-12			-4458 Sep 16 j 11:59	0° Ω	
greatest brilliancy	-4463 Oct 23 j 22:13	28° \mathbb{X} 12'51	-1.4m			-4458 Oct 24 j 22:44	0° \mathbb{M}	
asc. node	-4463 Oct 25 j 17:32	27° \mathbb{X} 29'32				-4458 Dec 02 j 10:40	0° \mathbb{X}	
direct	-4463 Dec 01 j 18:05	19° \mathbb{X} 00'26		evening set		-4458 Dec 30 j 12:37	21° \mathbb{X} 27'01	
	-4462 Jan 18 j 14:38	0° \mathbb{Y}				-4457 Jan 10 j 22:07	0° \mathbb{Z}	
	-4462 Mar 20 j 19:53	0° \mathbb{X}				-4457 Feb 21 j 01:46	0° \approx	
	-4462 May 10 j 14:57	0° \mathbb{I}						
	-4462 Jun 26 j 02:45	0° \mathbb{S}		conjunction		-4457 Feb 28 j 19:09	5° \approx 28'22	0°-55'-43
	-4462 Aug 08 j 11:22	0° \mathbb{Q}		minimum elong		-4457 Feb 28 j 21:16	5° \approx 32'06	0°55'54
evening set	-4462 Aug 25 j 01:41	11° \mathbb{Q} 58'47		max. Earth dist.		-4457 Apr 04 j 11:07	29° \approx 26'54	2.54607 AU
max. Earth dist.	-4462 Sep 13 j 11:32	26° \mathbb{Q} 19'03	2.41868 AU			-4457 Apr 05 j 06:38	0° \mathbb{X}	
	-4462 Sep 18 j 09:32	0° \mathbb{M}		morning rise		-4457 Apr 25 j 11:26	13° \mathbb{X} 32'49	
						-4457 May 20 j 13:31	0° \mathbb{Y}	
conjunction	-4462 Oct 20 j 17:04	24° \mathbb{M} 38'58	0°05'15	asc. node		-4457 Jun 17 j 16:55	18° \mathbb{Y} 01'02	
minimum elong	-4462 Oct 20 j 17:28	24° \mathbb{M} 39'45	0°05'18			-4457 Jul 06 j 19:24	0° \mathbb{X}	
behind sun begin	-4462 Oct 19 j 17:02	23° \mathbb{M} 52'34				-4457 Aug 25 j 07:01	0° \mathbb{I}	
behind sun end	-4462 Oct 21 j 17:55	25° \mathbb{M} 26'59				-4457 Oct 18 j 11:58	0° \mathbb{S}	
desc. node	-4462 Oct 27 j 23:22	0° Ω 16'40		retrograde		-4456 Jan 05 j 12:12	25° \mathbb{S} 19'23	
	-4462 Oct 27 j 14:47	0° Ω		opposition		-4456 Feb 10 j 14:18	17° \mathbb{S} 39'08	5°10'36
	-4462 Dec 04 j 22:59	0° \mathbb{M}		greatest brilliancy		-4456 Feb 12 j 10:51	16° \mathbb{S} 58'28	-1.8m
morning rise	-4462 Dec 23 j 22:01	14° \mathbb{M} 52'40		min. Earth dist.		-4456 Feb 18 j 08:06	14° \mathbb{S} 50'16	0.54685 AU
	-4461 Jan 12 j 07:09	0° \mathbb{X}		direct		-4456 Mar 21 j 07:24	8° \mathbb{S} 21'32	
	-4461 Feb 20 j 12:13	0° \mathbb{Z}				-4456 May 26 j 05:25	0° \mathbb{Q}	
	-4461 Apr 02 j 10:37	0° \approx		desc. node		-4456 Jun 18 j 17:46	13° \mathbb{Q} 56'45	
	-4461 May 15 j 23:28	0° \mathbb{X}				-4456 Jul 12 j 23:24	0° \mathbb{M}	
	-4461 Jul 02 j 12:24	0° \mathbb{Y}				-4456 Aug 23 j 12:59	0° Ω	
	-4461 Aug 28 j 19:06	0° \mathbb{X}				-4456 Oct 02 j 02:44	0° \mathbb{M}	
asc. node	-4461 Sep 12 j 18:24	5° \mathbb{X} 48'23				-4456 Nov 10 j 11:35	0° \mathbb{X}	
retrograde	-4461 Oct 18 j 18:22	12° \mathbb{X} 42'44				-4456 Dec 20 j 18:00	0° \mathbb{Z}	
opposition	-4461 Nov 27 j 14:35	3° \mathbb{X} 05'09	2°40'17			-4455 Jan 31 j 14:50	0° \approx	
greatest brilliancy	-4461 Nov 27 j 14:15	3° \mathbb{X} 05'29	-1.3m	evening set		-4455 Feb 23 j 11:35	15° \approx 50'14	
min. Earth dist.	-4461 Nov 28 j 00:54	2° \mathbb{X} 54'50	0.67148 AU			-4455 Mar 16 j 09:05	0° \mathbb{X}	
	-4461 Dec 05 j 11:12	30° \mathbb{R} \mathbb{Y}						
direct	-4460 Jan 07 j 07:19	23° \mathbb{Y} 14'27		conjunction		-4455 Apr 16 j 21:34	20° \mathbb{X} 53'10	0°-10'-6
	-4460 Feb 12 j 12:42	0° \mathbb{X}		minimum elong		-4455 Apr 16 j 22:01	20° \mathbb{X} 53'54	0°10'09
	-4460 Apr 16 j 07:56	0° \mathbb{I}		behind sun begin		-4455 Apr 16 j 05:47	20° \mathbb{X} 27'20	
	-4460 Jun 04 j 13:57	0° \mathbb{S}		behind sun end		-4455 Apr 17 j 14:15	21° \mathbb{X} 20'28	
	-4460 Jul 18 j 18:14	0° \mathbb{Q}				-4455 Apr 30 j 21:11	0° \mathbb{Y}	
	-4460 Aug 28 j 19:56	0° \mathbb{M}		max. Earth dist.		-4455 May 02 j 13:22	1° \mathbb{Y} 05'08	2.63453 AU
desc. node	-4460 Sep 13 j 20:01	12° \mathbb{M} 08'19		asc. node		-4455 May 04 j 13:30	2° \mathbb{Y} 23'05	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 45

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

morning rise	-4455 Jun 04 j 18:00	22°Υ25'14			-4450 Aug 26 j 10:30	30°℞	
	-4455 Jun 16 j 15:41	0°♄		opposition	-4450 Aug 27 j 13:20	29°♄35'18	-4°-55'-27
	-4455 Aug 03 j 04:33	0°♂		direct	-4450 Sep 30 j 12:52	22°♄18'19	
	-4455 Sep 20 j 09:44	0°♂			-4450 Nov 07 j 09:49	0°≈	
	-4455 Nov 09 j 05:52	0°♂		asc. node	-4450 Dec 25 j 06:46	21°≈57'55	
	-4454 Jan 04 j 02:30	0°♄			-4449 Jan 09 j 04:56	0°♄	
retrograde	-4454 Mar 06 j 09:00	17°♄20'32			-4449 Mar 02 j 09:39	0°Υ	
opposition	-4454 Apr 07 j 08:47	11°♄36'35	1°58'45		-4449 Apr 20 j 21:52	0°♄	
greatest brilliancy	-4454 Apr 08 j 05:43	11°♄20'45	-2.6m		-4449 Jun 07 j 12:10	0°♂	
min. Earth dist.	-4454 Apr 14 j 10:30	9°♄29'10	0.41952 AU	evening set	-4449 Jun 24 j 16:05	11°♂08'29	
desc. node	-4454 May 06 j 18:21	5°♄02'34		max. Earth dist.	-4449 Jul 15 j 14:22	24°♂59'30	2.58099 AU
direct	-4454 May 11 j 16:30	4°♄52'22			-4449 Jul 23 j 01:20	0°♂	
	-4454 Jul 20 j 07:38	0°♂					
	-4454 Sep 04 j 11:02	0°♂		conjunction	-4449 Aug 11 j 13:43	13°♂18'18	1°08'42
	-4454 Oct 17 j 03:19	0°♄		minimum elong	-4449 Aug 11 j 14:29	13°♂19'37	1°08'55
	-4454 Nov 28 j 15:36	0°♄			-4449 Sep 04 j 11:37	0°♂	
	-4453 Jan 11 j 04:06	0°≈		morning rise	-4449 Sep 29 j 21:12	18°♂12'34	
	-4453 Feb 25 j 02:55	0°♄			-4449 Oct 15 j 23:45	0°♄	
asc. node	-4453 Mar 22 j 10:31	16°♄30'43			-4449 Nov 25 j 00:28	0°♂	
evening set	-4453 Apr 08 j 17:30	27°♄40'20		desc. node	-4449 Dec 27 j 19:56	25°♂06'19	
	-4453 Apr 12 j 08:27	0°Υ			-4448 Jan 03 j 04:39	0°♂	
					-4448 Feb 11 j 07:29	0°♄	
conjunction	-4453 May 26 j 20:52	28°Υ27'20	0°35'12		-4448 Mar 22 j 09:23	0°♄	
minimum elong	-4453 May 26 j 19:44	28°Υ25'31	0°35'16		-4448 May 03 j 22:24	0°≈	
max. Earth dist.	-4453 May 26 j 21:30	28°Υ28'20	2.67024 AU		-4448 Jun 21 j 10:12	0°♄	
	-4453 May 29 j 06:59	0°♄		retrograde	-4448 Aug 30 j 17:20	23°♄40'45	
morning rise	-4453 Jul 11 j 14:56	27°♄41'40		min. Earth dist.	-4448 Oct 04 j 17:00	15°♄39'11	0.61019 AU
	-4453 Jul 15 j 05:07	0°♂		opposition	-4448 Oct 09 j 11:16	13°♄45'28	-1°-20'-6
	-4453 Aug 30 j 13:32	0°♂		greatest brilliancy	-4448 Oct 09 j 03:44	13°♄52'58	-1.6m
	-4453 Oct 15 j 04:30	0°♂		asc. node	-4448 Nov 11 j 07:43	5°♄06'10	
	-4453 Nov 29 j 07:30	0°♄		direct	-4448 Nov 16 j 04:47	4°♄56'59	
	-4452 Jan 13 j 13:58	0°♂			-4447 Feb 02 j 22:13	0°Υ	
	-4452 Feb 29 j 21:40	0°♂			-4447 Mar 29 j 21:22	0°♄	
desc. node	-4452 Mar 23 j 20:18	13°♂03'49			-4447 May 18 j 07:02	0°♂	
	-4452 May 03 j 22:48	0°♄			-4447 Jul 03 j 08:28	0°♂	
retrograde	-4452 May 23 j 11:02	2°♄28'47		evening set	-4447 Aug 05 j 18:48	23°♂00'40	
	-4452 Jun 12 j 01:16	30°♂			-4447 Aug 15 j 15:27	0°♂	
min. Earth dist.	-4452 Jun 19 j 13:30	28°♂02'24	0.38827 AU	max. Earth dist.	-4447 Aug 20 j 21:25	3°♂45'24	2.46742 AU
greatest brilliancy	-4452 Jun 23 j 03:21	27°♂02'02	-2.8m		-4447 Sep 25 j 15:45	0°♄	
opposition	-4452 Jun 24 j 10:30	26°♂40'02	-5°-51'-20				
direct	-4452 Jul 24 j 09:04	21°♂29'56		conjunction	-4447 Sep 27 j 21:39	1°♄40'59	0°31'56
	-4452 Sep 01 j 03:47	0°♄		minimum elong	-4447 Sep 27 j 23:27	1°♄44'22	0°32'00
	-4452 Oct 29 j 10:02	0°♄			-4447 Nov 04 j 00:41	0°♂	
	-4452 Dec 17 j 13:06	0°≈		desc. node	-4447 Nov 13 j 17:08	7°♂30'34	
	-4451 Feb 03 j 10:09	0°♄		morning rise	-4447 Nov 26 j 01:58	17°♂08'37	
asc. node	-4451 Feb 06 j 07:59	1°♄49'35			-4447 Dec 12 j 12:35	0°♂	
	-4451 Mar 23 j 06:16	0°Υ		greatest brilliancy	-4446 Jan 18 j 15:31	28°♂57'31	1.2m
	-4451 May 09 j 22:41	0°♄			-4446 Jan 19 j 23:47	0°♄	
evening set	-4451 May 16 j 20:53	4°♄23'06			-4446 Feb 28 j 07:30	0°♄	
max. Earth dist.	-4451 Jun 18 j 23:20	25°♄31'50	2.65164 AU		-4446 Apr 10 j 09:59	0°≈	
	-4451 Jun 25 j 21:30	0°♂			-4446 May 24 j 10:45	0°♄	
					-4446 Jul 12 j 19:10	0°Υ	
conjunction	-4451 Jul 02 j 12:47	4°♂18'13	1°05'08	asc. node	-4446 Sep 29 j 09:51	29°Υ32'48	
minimum elong	-4451 Jul 02 j 11:48	4°♂16'37	1°05'18	retrograde	-4446 Oct 05 j 07:27	29°Υ46'07	
	-4451 Aug 10 j 13:05	0°♂		min. Earth dist.	-4446 Nov 13 j 07:33	20°Υ22'51	0.66631 AU
morning rise	-4451 Aug 17 j 04:06	4°♂26'22		opposition	-4446 Nov 14 j 08:38	19°Υ57'39	1°41'57
	-4451 Sep 23 j 15:14	0°♂		greatest brilliancy	-4446 Nov 14 j 05:26	20°Υ00'52	-1.3m
	-4451 Nov 05 j 05:28	0°♄		direct	-4446 Dec 24 j 11:16	10°Υ18'48	
	-4451 Dec 16 j 15:08	0°♂			-4445 Mar 02 j 07:17	0°♄	
	-4450 Jan 26 j 08:56	0°♂			-4445 Apr 26 j 19:25	0°♂	
desc. node	-4450 Feb 08 j 21:50	9°♂57'57			-4445 Jun 13 j 14:32	0°♂	
	-4450 Mar 08 j 10:03	0°♄			-4445 Jul 27 j 08:39	0°♂	
	-4450 Apr 20 j 19:33	0°♄			-4445 Sep 06 j 07:46	0°♄	
	-4450 Jun 13 j 20:56	0°≈		evening set	-4445 Sep 28 j 20:02	17°♄08'09	
retrograde	-4450 Jul 20 j 22:51	8°≈31'05		desc. node	-4445 Oct 01 j 14:18	19°♄15'46	
min. Earth dist.	-4450 Aug 19 j 17:32	2°≈27'49	0.50052 AU		-4445 Oct 15 j 10:44	0°♂	
greatest brilliancy	-4450 Aug 25 j 19:43	0°≈13'39	-2.1m		-4445 Nov 22 j 15:54	0°♂	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 46

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

conjunction	-4445 Nov 30 j 16:36	6°♌19'27	0°-40'-54			-4440 Nov 22 j 11:18	0°♏	
minimum elong	-4445 Nov 30 j 13:28	6°♌13'17	0°41'00	retrograde		-4439 Feb 07 j 17:57	24°♏42'31	
max. Earth dist.	-4445 Dec 21 j 07:53	22°♌31'41	2.37839 AU	opposition		-4439 Mar 13 j 09:33	18°♏09'12	3°59'26
	-4445 Dec 30 j 21:44	0°♏		greatest brilliancy		-4439 Mar 15 j 04:51	17°♏33'09	-2.2m
morning rise	-4444 Feb 06 j 15:21	28°♏56'09		min. Earth dist.		-4439 Mar 21 j 20:08	15°♏21'27	0.46833 AU
	-4444 Feb 08 j 01:16	0°♏		direct		-4439 Apr 19 j 10:57	10°♏08'33	
	-4444 Mar 19 j 20:53	0°♏		desc. node		-4439 May 23 j 11:41	17°♏16'12	
	-4444 May 02 j 00:02	0°♏				-4439 Jun 19 j 05:39	0°♏	
	-4444 Jun 17 j 02:22	0°♏				-4439 Aug 05 j 13:17	0°♏	
	-4444 Aug 06 j 20:09	0°♏				-4439 Sep 16 j 09:03	0°♏	
asc. node	-4444 Aug 16 j 10:15	5°♏10'05				-4439 Oct 27 j 02:45	0°♏	
	-4444 Oct 14 j 12:51	0°♏				-4439 Dec 07 j 09:51	0°♏	
retrograde	-4444 Nov 08 j 11:32	3°♏27'50				-4438 Jan 19 j 02:00	0°♏	
	-4444 Dec 01 j 14:58	30°♏				-4438 Mar 04 j 10:43	0°♏	
opposition	-4444 Dec 17 j 16:30	24°♏14'16	3°57'38	evening set		-4438 Mar 23 j 11:22	12°♏32'57	
greatest brilliancy	-4444 Dec 18 j 02:23	24°♏04'30	-1.3m	asc. node		-4438 Apr 08 j 02:16	22°♏44'10	
min. Earth dist.	-4444 Dec 20 j 10:36	23°♏09'00	0.65991 AU			-4438 Apr 19 j 07:28	0°♏	
direct	-4443 Jan 27 j 21:00	14°♏13'59						
	-4443 Mar 27 j 01:15	0°♏		conjunction		-4438 May 11 j 21:42	14°♏31'41	0°18'54
	-4443 May 20 j 22:18	0°♏		minimum elong		-4438 May 11 j 20:59	14°♏30'33	0°18'57
	-4443 Jul 05 j 13:27	0°♏		max. Earth dist.		-4438 May 17 j 15:39	18°♏12'29	2.66277 AU
	-4443 Aug 16 j 03:03	0°♏				-4438 Jun 05 j 02:51	0°♏	
desc. node	-4443 Aug 18 j 11:38	1°♏45'40		morning rise		-4438 Jun 27 j 12:00	14°♏15'45	
	-4443 Sep 24 j 10:33	0°♏				-4438 Jul 22 j 04:29	0°♏	
	-4443 Nov 01 j 17:40	0°♏				-4438 Sep 07 j 01:41	0°♏	
evening set	-4443 Dec 04 j 13:07	25°♏42'03				-4438 Oct 23 j 19:28	0°♏	
	-4443 Dec 10 j 01:58	0°♏				-4438 Dec 10 j 01:19	0°♏	
	-4442 Jan 18 j 09:16	0°♏				-4437 Jan 28 j 20:09	0°♏	
						-4437 Apr 08 j 22:55	0°♏	
conjunction	-4442 Feb 06 j 03:58	13°♏55'40	-1°-6'-15	desc. node		-4437 Apr 10 j 13:31	0°♏16'50	
minimum elong	-4442 Feb 06 j 05:12	13°♏57'57	1°06'28	retrograde		-4437 Apr 24 j 01:05	1°♏25'43	
	-4442 Feb 28 j 08:31	0°♏				-4437 May 09 j 03:46	30°♏	
max. Earth dist.	-4442 Mar 20 j 20:14	14°♏27'44	2.49865 AU	opposition		-4437 May 24 j 13:33	26°♏21'38	-3°-15'-26
morning rise	-4442 Apr 06 j 18:10	26°♏08'16		greatest brilliancy		-4437 May 24 j 13:05	26°♏21'57	-2.9m
	-4442 Apr 12 j 10:17	0°♏		min. Earth dist.		-4437 May 24 j 22:29	26°♏15'40	0.37738 AU
	-4442 May 27 j 18:03	0°♏		direct		-4437 Jun 23 j 22:34	21°♏16'17	
asc. node	-4442 Jul 04 j 08:33	23°♏47'04				-4437 Aug 01 j 10:41	0°♏	
	-4442 Jul 14 j 10:57	0°♏				-4437 Sep 26 j 08:08	0°♏	
	-4442 Sep 03 j 12:52	0°♏				-4437 Nov 12 j 06:33	0°♏	
	-4442 Nov 04 j 06:28	0°♏				-4437 Dec 28 j 03:26	0°♏	
retrograde	-4442 Dec 18 j 05:51	9°♏31'36				-4436 Feb 12 j 11:44	0°♏	
opposition	-4441 Jan 24 j 11:44	1°♏18'01	5°11'28	asc. node		-4436 Feb 23 j 22:45	7°♏20'42	
greatest brilliancy	-4441 Jan 25 j 23:23	0°♏44'20	-1.6m			-4436 Mar 30 j 12:43	0°♏	
	-4441 Jan 27 j 22:14	30°♏		evening set		-4436 May 01 j 23:43	20°♏34'24	
min. Earth dist.	-4441 Jan 30 j 23:59	28°♏50'48	0.58999 AU			-4436 May 16 j 20:13	0°♏	
direct	-4441 Mar 06 j 02:30	21°♏34'37		max. Earth dist.		-4436 Jun 09 j 14:41	15°♏08'53	2.66528 AU
	-4441 Apr 14 j 04:09	0°♏						
	-4441 Jun 10 j 02:32	0°♏		conjunction		-4436 Jun 17 j 22:16	20°♏28'36	0°56'02
desc. node	-4441 Jul 06 j 10:01	17°♏22'11		minimum elong		-4436 Jun 17 j 21:00	20°♏26'35	0°56'11
	-4441 Jul 24 j 08:48	0°♏				-4436 Jul 02 j 17:19	0°♏	
	-4441 Sep 02 j 18:53	0°♏		morning rise		-4436 Aug 02 j 05:38	19°♏52'27	
	-4441 Oct 11 j 17:53	0°♏				-4436 Aug 17 j 13:39	0°♏	
	-4441 Nov 19 j 15:37	0°♏				-4436 Oct 01 j 02:56	0°♏	
	-4441 Dec 29 j 12:21	0°♏				-4436 Nov 13 j 10:33	0°♏	
evening set	-4440 Feb 04 j 11:56	26°♏47'49				-4436 Dec 25 j 20:00	0°♏	
	-4440 Feb 09 j 00:28	0°♏				-4435 Feb 05 j 21:27	0°♏	
	-4440 Mar 23 j 11:45	0°♏		desc. node		-4435 Feb 25 j 14:00	13°♏53'01	
						-4435 Mar 21 j 01:07	0°♏	
conjunction	-4440 Mar 30 j 13:38	4°♏45'41	0°-29'-5			-4435 May 09 j 05:14	0°♏	
minimum elong	-4440 Mar 30 j 14:58	4°♏47'55	0°29'11	retrograde		-4435 Jun 30 j 23:49	16°♏02'18	
max. Earth dist.	-4440 Apr 22 j 06:04	19°♏49'03	2.60593 AU	min. Earth dist.		-4435 Jul 28 j 18:11	10°♏50'53	0.45041 AU
	-4440 May 07 j 19:58	0°♏		greatest brilliancy		-4435 Aug 03 j 15:59	8°♏50'47	-2.4m
morning rise	-4440 May 20 j 13:25	8°♏13'58		opposition		-4435 Aug 05 j 18:48	8°♏07'22	-6°-4'-59
asc. node	-4440 May 21 j 06:13	8°♏41'02		direct		-4435 Sep 07 j 00:26	1°♏40'58	
	-4440 Jun 23 j 16:24	0°♏				-4435 Nov 27 j 20:22	0°♏	
	-4440 Aug 10 j 17:42	0°♏		asc. node		-4434 Jan 10 j 21:56	24°♏49'32	
	-4440 Sep 29 j 09:32	0°♏				-4434 Jan 19 j 17:04	0°♏	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 47

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4434 Mar 10 j 13:45	0°♈		behind sun begin	-4430 Nov 03 j 02:12	8°♎45'02	
	-4434 Apr 28 j 04:14	0°♉		behind sun end	-4430 Nov 04 j 14:59	9°♎56'57	
evening set	-4434 Jun 09 j 08:58	26°♉44'02			-4430 Nov 30 j 03:57	0°♏	
	-4434 Jun 14 j 10:38	0°♊			-4429 Jan 07 j 10:54	0°♐	
max. Earth dist.	-4434 Jul 04 j 15:18	13°♊09'05	2.61453 AU	morning rise	-4429 Jan 09 j 07:06	1°♐25'53	
					-4429 Feb 15 j 14:47	0°♑	
conjunction	-4434 Jul 26 j 10:15	27°♊36'38	1°11'17		-4429 Mar 28 j 11:01	0°♒	
minimum elong	-4434 Jul 26 j 10:12	27°♊36'32	1°11'29		-4429 May 10 j 18:14	0°♓	
	-4434 Jul 29 j 23:39	0°♋			-4429 Jun 26 j 13:43	0°♈	
morning rise	-4434 Sep 11 j 17:18	0°♌04'10			-4429 Aug 19 j 08:15	0°♉	
	-4434 Sep 11 j 14:55	0°♌		asc. node	-4429 Sep 03 j 01:07	6°♉49'30	
	-4434 Oct 23 j 11:17	0°♍		retrograde	-4429 Oct 26 j 13:18	20°♉31'19	
	-4434 Dec 02 j 22:05	0°♎		opposition	-4429 Dec 05 j 05:27	11°♉01'25	3°10'52
	-4433 Jan 11 j 12:58	0°♏		greatest brilliancy	-4429 Dec 05 j 08:05	10°♉58'47	-1.3m
desc. node	-4433 Jan 13 j 13:18	1°♏31'56		min. Earth dist.	-4429 Dec 06 j 11:48	10°♉31'10	0.67016 AU
	-4433 Feb 20 j 03:16	0°♐		direct	-4428 Jan 15 j 04:06	1°♉05'53	
	-4433 Apr 01 j 21:34	0°♑			-4428 Apr 09 j 09:28	0°♊	
	-4433 May 16 j 00:11	0°♒			-4428 May 30 j 02:16	0°♋	
	-4433 Jul 11 j 05:20	0°♓			-4428 Jul 13 j 17:26	0°♌	
retrograde	-4433 Aug 16 j 15:31	7°♓53'01			-4428 Aug 23 j 22:56	0°♍	
min. Earth dist.	-4433 Sep 18 j 17:22	0°♓32'52	0.57269 AU	desc. node	-4428 Sep 04 j 05:36	8°♍30'45	
	-4433 Sep 20 j 03:15	30°♓			-4428 Oct 02 j 03:13	0°♎	
opposition	-4433 Sep 24 j 20:34	28°♓09'00	-2°-42'-12	evening set	-4428 Nov 07 j 09:33	28°♎27'42	
greatest brilliancy	-4433 Sep 24 j 01:35	28°♓27'35	-1.7m		-4428 Nov 09 j 08:24	0°♏	
direct	-4433 Oct 31 j 07:17	19°♓50'04			-4428 Dec 17 j 14:29	0°♐	
asc. node	-4433 Nov 28 j 22:41	24°♓22'24					
	-4433 Dec 15 j 10:16	0°♈		conjunction	-4427 Jan 11 j 21:01	19°♐27'55	-1°-6'-55
	-4432 Feb 15 j 04:09	0°♈		minimum elong	-4427 Jan 11 j 19:53	19°♐25'46	1°07'09
	-4432 Apr 07 j 03:48	0°♉			-4427 Jan 25 j 19:05	0°♑	
	-4432 May 25 j 15:44	0°♊		max. Earth dist.	-4427 Mar 01 j 15:21	25°♑40'41	2.44715 AU
	-4432 Jul 10 j 10:42	0°♋			-4427 Mar 07 j 15:33	0°♒	
evening set	-4432 Jul 19 j 03:23	5°♋53'29		morning rise	-4427 Mar 16 j 17:05	6°♒27'28	
max. Earth dist.	-4432 Aug 04 j 03:51	16°♋55'08	2.51575 AU		-4427 Apr 19 j 15:52	0°♓	
	-4432 Aug 22 j 18:14	0°♌			-4427 Jun 04 j 03:13	0°♈	
				asc. node	-4427 Jul 21 j 00:17	29°♈04'30	
conjunction	-4432 Sep 07 j 14:29	11°♌22'51	0°51'52		-4427 Jul 22 j 13:29	0°♉	
minimum elong	-4432 Sep 07 j 16:22	11°♌26'16	0°52'01		-4427 Sep 14 j 09:16	0°♊	
	-4432 Oct 02 j 22:22	0°♍		retrograde	-4427 Dec 01 j 19:57	25°♊03'59	
morning rise	-4432 Nov 01 j 01:51	21°♍59'51		opposition	-4426 Jan 09 j 00:14	16°♊23'07	4°52'37
	-4432 Nov 11 j 12:31	0°♎		greatest brilliancy	-4426 Jan 10 j 01:13	15°♊58'59	-1.4m
desc. node	-4432 Nov 30 j 11:15	14°♎38'18		min. Earth dist.	-4426 Jan 14 j 02:02	14°♊25'34	0.62502 AU
	-4432 Dec 20 j 05:31	0°♏		direct	-4426 Feb 19 j 02:35	6°♊26'30	
	-4431 Jan 27 j 20:58	0°♐			-4426 May 02 j 09:50	0°♋	
	-4431 Mar 08 j 08:54	0°♑			-4426 Jun 20 j 19:56	0°♌	
	-4431 Apr 18 j 18:41	0°♒		desc. node	-4426 Jul 23 j 04:35	22°♌27'51	
	-4431 Jun 02 j 16:29	0°♓			-4426 Aug 02 j 13:26	0°♍	
	-4431 Jul 25 j 19:42	0°♈			-4426 Sep 11 j 08:46	0°♎	
retrograde	-4431 Sep 21 j 19:43	16°♈29'29			-4426 Oct 19 j 22:54	0°♏	
asc. node	-4431 Oct 15 j 23:46	12°♈32'13			-4426 Nov 27 j 13:07	0°♐	
min. Earth dist.	-4431 Oct 29 j 09:28	7°♈34'30	0.65166 AU		-4425 Jan 06 j 02:33	0°♑	
opposition	-4431 Oct 31 j 21:42	6°♈33'59	0°36'51	evening set	-4425 Jan 13 j 05:40	5°♑17'15	
greatest brilliancy	-4431 Oct 31 j 19:21	6°♈36'20	-1.4m		-4425 Feb 16 j 07:48	0°♒	
	-4431 Nov 19 j 10:30	30°♈					
direct	-4431 Dec 10 j 05:36	27°♈11'00		conjunction	-4425 Mar 12 j 13:55	17°♈00'14	0°-46'-51
	-4430 Jan 01 j 16:37	0°♈		minimum elong	-4425 Mar 12 j 15:56	17°♈03'44	0°47'01
	-4430 Mar 14 j 05:45	0°♉			-4425 Mar 31 j 13:36	0°♊	
	-4430 May 05 j 07:45	0°♊		max. Earth dist.	-4425 Apr 11 j 20:40	7°♊36'29	2.56942 AU
	-4430 Jun 21 j 05:31	0°♋		morning rise	-4425 May 05 j 09:25	23°♊11'42	
	-4430 Aug 03 j 17:38	0°♌			-4425 May 15 j 19:44	0°♈	
evening set	-4430 Sep 06 j 00:12	24°♌15'42		asc. node	-4425 Jun 07 j 21:15	14°♈50'32	
	-4430 Sep 13 j 16:17	0°♍			-4425 Jul 01 j 20:42	0°♉	
max. Earth dist.	-4430 Oct 03 j 20:11	15°♍18'24	2.39464 AU		-4425 Aug 19 j 16:32	0°♊	
desc. node	-4430 Oct 18 j 07:46	26°♍28'19			-4425 Oct 10 j 16:15	0°♋	
	-4430 Oct 22 j 20:52	0°♎			-4425 Dec 15 j 13:05	0°♌	
				retrograde	-4424 Jan 17 j 00:36	5°♌33'54	
conjunction	-4430 Nov 03 j 21:35	9°♎22'55	0°-11'-57		-4424 Feb 16 j 06:48	30°♌	
minimum elong	-4430 Nov 03 j 20:36	9°♎20'59	0°11'59	opposition	-4424 Feb 21 j 07:37	28°♎15'31	4°56'35

Planetary Phenomena of Mars from -4900 through -4400 (UT), AstroDienst AG 7-Dez-2017 14:34, page 48

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

greatest brilliancy	-4424 Feb 23 j 06:52	27° \mathfrak{G} 33'31	-1.9m		-4419 Mar 18 j 07:09	0° Υ	
min. Earth dist.	-4424 Feb 29 j 12:59	25° \mathfrak{G} 20'47	0.51993 AU		-4419 May 05 j 06:26	0° \mathfrak{B}	
direct	-4424 Mar 31 j 06:56	19° \mathfrak{G} 19'27		evening set	-4419 May 25 j 09:38	12° \mathfrak{B} 44'41	
	-4424 May 13 j 13:27	0° \mathfrak{Q}			-4419 Jun 21 j 07:35	0° \mathfrak{H}	
desc. node	-4424 Jun 09 j 04:02	13° \mathfrak{Q} 39'15		max. Earth dist.	-4419 Jun 24 j 14:54	2° \mathfrak{H} 08'19	2.64048 AU
	-4424 Jul 05 j 11:44	0° \mathfrak{M}					
	-4424 Aug 17 j 06:24	0° \mathfrak{A}		conjunction	-4419 Jul 11 j 02:11	12° \mathfrak{H} 52'36	1°08'40
	-4424 Sep 26 j 09:52	0° \mathfrak{M}		minimum elong	-4419 Jul 11 j 01:28	12° \mathfrak{H} 51'27	1°08'51
	-4424 Nov 05 j 03:20	0° \mathfrak{X}			-4419 Aug 05 j 22:12	0° \mathfrak{G}	
	-4424 Dec 15 j 16:18	0° \mathfrak{Z}		morning rise	-4419 Aug 26 j 03:42	13° \mathfrak{G} 40'20	
	-4423 Jan 26 j 18:08	0° \mathfrak{A}			-4419 Sep 18 j 20:17	0° \mathfrak{Q}	
evening set	-4423 Mar 06 j 01:16	26° \mathfrak{A} 14'05			-4419 Oct 31 j 03:40	0° \mathfrak{M}	
	-4423 Mar 11 j 15:56	0° \mathfrak{X}			-4419 Dec 11 j 04:12	0° \mathfrak{A}	
asc. node	-4423 Apr 24 j 18:45	29° \mathfrak{X} 03'03			-4418 Jan 20 j 10:44	0° \mathfrak{M}	
				desc. node	-4418 Jan 30 j 06:37	7° \mathfrak{M} 20'38	
conjunction	-4423 Apr 26 j 06:30	0° Υ 01'01	0°00'52		-4418 Mar 01 j 19:43	0° \mathfrak{X}	
minimum elong	-4423 Apr 26 j 06:25	0° Υ 00'53	0°00'52		-4418 Apr 12 j 20:55	0° \mathfrak{Z}	
behind sun begin	-4423 Apr 25 j 10:05	29° \mathfrak{X} 27'56			-4418 May 30 j 18:22	0° \mathfrak{A}	
behind sun end	-4423 Apr 27 j 02:45	0° Υ 33'49		retrograde	-4418 Jul 31 j 03:51	20° \mathfrak{A} 07'32	
	-4423 Apr 26 j 05:51	0° Υ		min. Earth dist.	-4418 Aug 31 j 03:06	13° \mathfrak{A} 35'42	0.52763 AU
max. Earth dist.	-4423 May 08 j 08:09	7° Υ 49'03	2.64674 AU	greatest brilliancy	-4418 Sep 06 j 01:50	11° \mathfrak{A} 21'00	-1.9m
	-4423 Jun 11 j 23:45	0° \mathfrak{B}		opposition	-4418 Sep 07 j 11:15	10° \mathfrak{A} 49'22	-4°-7'-57
morning rise	-4423 Jun 13 j 04:21	0° \mathfrak{B} 45'30		direct	-4418 Oct 12 j 09:44	3° \mathfrak{A} 07'58	
	-4423 Jul 29 j 07:28	0° \mathfrak{H}		asc. node	-4418 Dec 15 j 13:24	21° \mathfrak{A} 44'49	
	-4423 Sep 14 j 22:54	0° \mathfrak{G}			-4417 Jan 01 j 08:05	0° \mathfrak{X}	
	-4423 Nov 02 j 09:07	0° \mathfrak{Q}			-4417 Feb 24 j 16:46	0° Υ	
	-4423 Dec 23 j 14:33	0° \mathfrak{M}			-4417 Apr 15 j 22:36	0° \mathfrak{B}	
	-4422 Mar 03 j 05:49	0° \mathfrak{A}			-4417 Jun 02 j 19:57	0° \mathfrak{H}	
retrograde	-4422 Mar 23 j 06:29	2° \mathfrak{A} 20'36		evening set	-4417 Jul 03 j 15:59	20° \mathfrak{H} 06'02	
	-4422 Apr 11 j 23:46	30° \mathfrak{R} \mathfrak{M}			-4417 Jul 18 j 11:22	0° \mathfrak{G}	
opposition	-4422 Apr 23 j 08:30	27° \mathfrak{M} 01'18	0°16'44	max. Earth dist.	-4417 Jul 22 j 11:56	2° \mathfrak{G} 43'07	2.55941 AU
greatest brilliancy	-4422 Apr 23 j 11:04	26° \mathfrak{M} 59'29	-2.7m				
desc. node	-4422 Apr 27 j 05:12	25° \mathfrak{M} 55'46		conjunction	-4417 Aug 21 j 07:03	23° \mathfrak{G} 15'02	1°04'31
min. Earth dist.	-4422 Apr 28 j 17:30	25° \mathfrak{M} 30'24	0.39769 AU	minimum elong	-4417 Aug 21 j 08:18	23° \mathfrak{G} 17'12	1°04'42
direct	-4422 May 25 j 23:48	21° \mathfrak{M} 01'53			-4417 Aug 30 j 20:54	0° \mathfrak{Q}	
	-4422 Jul 03 j 13:04	0° \mathfrak{A}		morning rise	-4417 Oct 11 j 03:40	29° \mathfrak{Q} 55'23	
	-4422 Aug 26 j 10:10	0° \mathfrak{M}			-4417 Oct 11 j 06:09	0° \mathfrak{M}	
	-4422 Oct 10 j 04:00	0° \mathfrak{X}			-4417 Nov 20 j 02:44	0° \mathfrak{A}	
	-4422 Nov 22 j 17:00	0° \mathfrak{Z}		desc. node	-4417 Dec 18 j 05:10	21° \mathfrak{A} 35'29	
	-4421 Jan 05 j 20:30	0° \mathfrak{A}			-4417 Dec 29 j 02:22	0° \mathfrak{M}	
	-4421 Feb 20 j 04:39	0° \mathfrak{X}			-4416 Feb 06 j 00:05	0° \mathfrak{X}	
asc. node	-4421 Mar 12 j 15:51	13° \mathfrak{X} 17'24			-4416 Mar 16 j 19:12	0° \mathfrak{Z}	
	-4421 Apr 07 j 15:42	0° Υ			-4416 Apr 27 j 18:33	0° \mathfrak{A}	
evening set	-4421 Apr 17 j 17:14	6° Υ 26'00			-4416 Jun 13 j 08:55	0° \mathfrak{X}	
	-4421 May 24 j 16:41	0° \mathfrak{B}			-4416 Aug 18 j 18:34	0° Υ	
max. Earth dist.	-4421 Jun 01 j 07:13	4° \mathfrak{B} 50'55	2.67071 AU	retrograde	-4416 Sep 07 j 23:21	2° Υ 31'58	
					-4416 Sep 27 j 01:36	30° \mathfrak{R} \mathfrak{X}	
conjunction	-4421 Jun 04 j 07:50	6° \mathfrak{B} 46'44	0°43'39	min. Earth dist.	-4416 Oct 13 j 22:33	24° \mathfrak{X} 09'43	0.62760 AU
minimum elong	-4421 Jun 04 j 06:35	6° \mathfrak{B} 44'43	0°43'46	opposition	-4416 Oct 17 j 21:28	22° \mathfrak{X} 34'46	0°-35'-17
	-4421 Jul 10 j 13:55	0° \mathfrak{H}		greatest brilliancy	-4416 Oct 17 j 18:39	22° \mathfrak{X} 37'35	-1.5m
morning rise	-4421 Jul 19 j 19:14	5° \mathfrak{H} 56'51		asc. node	-4416 Nov 01 j 14:43	17° \mathfrak{X} 12'11	
	-4421 Aug 25 j 17:32	0° \mathfrak{G}		direct	-4416 Nov 25 j 05:52	13° \mathfrak{X} 32'26	
	-4421 Oct 09 j 22:10	0° \mathfrak{Q}			-4415 Jan 25 j 00:11	0° Υ	
	-4421 Nov 23 j 06:47	0° \mathfrak{M}			-4415 Mar 24 j 01:34	0° \mathfrak{B}	
	-4420 Jan 06 j 05:39	0° \mathfrak{A}			-4415 May 13 j 06:26	0° \mathfrak{H}	
	-4420 Feb 19 j 19:02	0° \mathfrak{M}			-4415 Jun 28 j 14:53	0° \mathfrak{G}	
desc. node	-4420 Mar 14 j 07:25	15° \mathfrak{M} 05'02			-4415 Aug 11 j 00:10	0° \mathfrak{Q}	
	-4420 Apr 08 j 18:00	0° \mathfrak{X}		evening set	-4415 Aug 16 j 11:14	3° \mathfrak{Q} 54'23	
retrograde	-4420 Jun 07 j 15:38	19° \mathfrak{X} 30'46		max. Earth dist.	-4415 Sep 01 j 21:48	15° \mathfrak{Q} 50'13	2.44027 AU
min. Earth dist.	-4420 Jul 04 j 06:40	14° \mathfrak{X} 58'39	0.40587 AU		-4415 Sep 21 j 00:16	0° \mathfrak{M}	
greatest brilliancy	-4420 Jul 09 j 02:31	13° \mathfrak{X} 31'40	-2.6m				
opposition	-4420 Jul 10 j 22:46	12° \mathfrak{X} 58'04	-6°-24'-21	conjunction	-4415 Oct 10 j 10:21	14° \mathfrak{M} 41'39	0°17'29
direct	-4420 Aug 10 j 14:30	7° \mathfrak{X} 25'00		minimum elong	-4415 Oct 10 j 11:33	14° \mathfrak{M} 43'55	0°17'31
	-4420 Oct 19 j 01:00	0° \mathfrak{Z}			-4415 Oct 30 j 07:44	0° \mathfrak{A}	
	-4420 Dec 10 j 17:57	0° \mathfrak{A}		desc. node	-4415 Nov 04 j 03:36	3° \mathfrak{A} 44'41	
asc. node	-4419 Jan 27 j 13:22	29° \mathfrak{A} 11'12			-4415 Dec 07 j 17:40	0° \mathfrak{M}	
	-4419 Jan 28 j 21:01	0° \mathfrak{X}		morning rise	-4415 Dec 11 j 11:17	2° \mathfrak{M} 55'45	

Planetary Phenomena of Mars from -4900 through -4400 (UT), Astrodienst AG 7-Dez-2017 14:34, page 49

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4414 Jan 15 j 02:35	0°♊		direct	-4409 Mar 15 j 04:51	1°♉19'46	
	-4414 Feb 23 j 07:43	0°♋			-4409 Jun 02 j 03:26	0°♌	
	-4414 Apr 05 j 06:16	0°♍		desc. node	-4409 Jun 26 j 21:05	15°♌30'13	
	-4414 May 18 j 21:28	0°♎			-4409 Jul 18 j 02:59	0°♍	
	-4414 Jul 05 j 22:53	0°♏			-4409 Aug 28 j 03:23	0°♎	
	-4414 Sep 05 j 00:21	0°♐			-4409 Oct 06 j 10:00	0°♏	
asc. node	-4414 Sep 19 j 15:17	4°♏30'50			-4409 Nov 14 j 12:50	0°♐	
retrograde	-4414 Oct 13 j 01:16	7°♏40'39			-4409 Dec 24 j 13:35	0°♑	
	-4414 Nov 16 j 21:25	30°♏			-4408 Feb 04 j 05:10	0°♒	
opposition	-4414 Nov 22 j 00:17	27°♏57'51	2°16'46	evening set	-4408 Feb 16 j 02:38	8°♒19'33	
greatest brilliancy	-4414 Nov 21 j 22:17	27°♏59'51	-1.3m		-4408 Mar 18 j 18:52	0°♓	
min. Earth dist.	-4414 Nov 21 j 19:07	28°♏03'02	0.67049 AU				
direct	-4413 Jan 01 j 11:17	18°♏11'46		conjunction	-4408 Apr 09 j 15:23	14°♓34'53	0°-18'-8
	-4413 Feb 20 j 07:53	0°♐		minimum elong	-4408 Apr 09 j 16:12	14°♓36'15	0°18'12
	-4413 Apr 20 j 18:51	0°♑		max. Earth dist.	-4408 Apr 28 j 09:49	26°♓53'57	2.62274 AU
	-4413 Jun 08 j 10:25	0°♒			-4408 May 03 j 04:08	0°♑	
	-4413 Jul 22 j 11:41	0°♓		asc. node	-4408 May 11 j 11:18	5°♑22'48	
	-4413 Sep 01 j 13:17	0°♔		morning rise	-4408 May 29 j 09:01	16°♑53'49	
desc. node	-4413 Sep 22 j 00:09	15°♔32'09			-4408 Jun 18 j 22:32	0°♒	
	-4413 Oct 10 j 16:53	0°♕			-4408 Aug 05 j 15:45	0°♑	
evening set	-4413 Oct 12 j 20:00	1°♕39'34			-4408 Sep 23 j 09:47	0°♒	
	-4413 Nov 17 j 22:05	0°♖			-4408 Nov 13 j 15:59	0°♓	
					-4407 Jan 15 j 09:42	0°♔	
conjunction	-4413 Dec 16 j 08:19	22°♖20'52	0°-53'-58	retrograde	-4407 Feb 22 j 05:47	7°♔28'00	
minimum elong	-4413 Dec 16 j 05:06	22°♖14'35	0°54'07	opposition	-4407 Mar 26 j 23:39	1°♔21'47	2°59'33
	-4413 Dec 26 j 03:34	0°♊		greatest brilliancy	-4407 Mar 28 j 08:31	0°♔55'43	-2.4m
max. Earth dist.	-4412 Jan 28 j 14:29	25°♊43'01	2.39707 AU		-4407 Mar 31 j 06:38	30°♒	
	-4412 Feb 03 j 06:37	0°♋		min. Earth dist.	-4407 Apr 03 j 21:53	28°♒52'04	0.44048 AU
morning rise	-4412 Feb 21 j 13:49	13°♋38'31		direct	-4407 May 01 j 14:03	24°♒01'27	
	-4412 Mar 15 j 01:22	0°♌		desc. node	-4407 May 13 j 21:49	25°♒03'16	
	-4412 Apr 27 j 01:40	0°♍			-4407 Jun 01 j 10:04	0°♔	
	-4412 Jun 11 j 19:53	0°♎			-4407 Jul 27 j 17:08	0°♕	
	-4412 Jul 31 j 10:14	0°♏			-4407 Sep 09 j 10:13	0°♖	
asc. node	-4412 Aug 06 j 15:20	3°♏31'10			-4407 Oct 21 j 01:52	0°♐	
	-4412 Sep 29 j 00:13	0°♑			-4407 Dec 01 j 22:33	0°♑	
retrograde	-4412 Nov 16 j 17:29	11°♑28'12			-4406 Jan 14 j 00:09	0°♒	
opposition	-4412 Dec 25 j 15:04	2°♑25'10	4°20'44		-4406 Feb 27 j 15:05	0°♓	
greatest brilliancy	-4412 Dec 26 j 05:59	2°♑10'33	-1.3m	asc. node	-4406 Mar 29 j 07:56	19°♓26'42	
min. Earth dist.	-4412 Dec 29 j 05:22	1°♑00'33	0.65022 AU	evening set	-4406 Apr 01 j 21:15	21°♓44'58	
	-4412 Dec 31 j 19:51	30°♒			-4406 Apr 14 j 15:45	0°♑	
direct	-4411 Feb 04 j 20:54	22°♒24'12					
	-4411 Mar 14 j 20:59	0°♑		conjunction	-4406 May 20 j 13:02	22°♑59'56	0°28'36
	-4411 May 14 j 10:31	0°♒		minimum elong	-4406 May 20 j 12:03	22°♑58'21	0°28'41
	-4411 Jun 30 j 01:53	0°♓		max. Earth dist.	-4406 May 23 j 02:00	24°♑37'13	2.66791 AU
desc. node	-4411 Aug 08 j 21:20	28°♓26'18			-4406 May 31 j 12:24	0°♒	
	-4411 Aug 10 j 23:54	0°♔		morning rise	-4406 Jul 05 j 14:52	22°♒24'00	
	-4411 Sep 19 j 11:00	0°♕			-4406 Jul 17 j 11:54	0°♑	
	-4411 Oct 27 j 20:10	0°♖			-4406 Sep 02 j 01:55	0°♒	
	-4411 Dec 05 j 05:52	0°♊			-4406 Oct 18 j 03:46	0°♓	
evening set	-4411 Dec 19 j 11:06	10°♊57'12			-4406 Dec 03 j 02:02	0°♔	
	-4410 Jan 13 j 14:29	0°♋			-4405 Jan 18 j 20:28	0°♕	
					-4405 Mar 11 j 02:11	0°♖	
conjunction	-4410 Feb 19 j 07:43	26°♋55'14	-1°-1'-7	desc. node	-4405 Mar 31 j 22:55	9°♖52'54	
minimum elong	-4410 Feb 19 j 09:39	26°♋58'43	1°01'18	retrograde	-4405 May 11 j 15:25	19°♖23'23	
	-4410 Feb 23 j 14:57	0°♌		min. Earth dist.	-4405 Jun 08 j 23:44	14°♖47'00	0.37960 AU
max. Earth dist.	-4410 Mar 29 j 12:13	23°♌43'20	2.52555 AU	opposition	-4405 Jun 11 j 18:09	14°♖02'03	-4°-58'-9
	-4410 Apr 07 j 16:52	0°♍		greatest brilliancy	-4405 Jun 11 j 01:25	14°♖13'23	-2.8m
morning rise	-4410 Apr 17 j 16:12	6°♍44'07		direct	-4405 Jul 11 j 13:29	9°♖01'31	
	-4410 May 22 j 22:38	0°♎			-4405 Sep 14 j 13:20	0°♐	
asc. node	-4410 Jun 24 j 14:22	20°♎49'54			-4405 Nov 04 j 17:56	0°♑	
	-4410 Jul 09 j 07:25	0°♏			-4405 Dec 22 j 03:57	0°♒	
	-4410 Aug 28 j 07:42	0°♑			-4404 Feb 07 j 06:18	0°♓	
	-4410 Oct 23 j 16:43	0°♒		asc. node	-4404 Feb 14 j 05:03	4°♓24'22	
retrograde	-4410 Dec 28 j 08:54	18°♒47'00			-4404 Mar 25 j 17:00	0°♑	
opposition	-4409 Feb 03 j 00:12	10°♒51'02	5°13'25	evening set	-4404 May 10 j 13:19	28°♑56'44	
greatest brilliancy	-4409 Feb 04 j 17:16	10°♒12'54	-1.7m		-4404 May 12 j 05:15	0°♒	
min. Earth dist.	-4409 Feb 10 j 05:44	8°♒10'21	0.56722 AU	max. Earth dist.	-4404 Jun 15 j 02:00	21°♒35'06	2.65882 AU

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

conjunction	-4404 Jun 26 j 06:42	28°♄47'34	1°01'44
minimum elong	-4404 Jun 26 j 05:35	28°♄45'45	1°01'54
	-4404 Jun 28 j 03:33	0°♂	
morning rise	-4404 Aug 10 j 16:45	28°♂31'31	
	-4404 Aug 12 j 21:56	0°♄	
	-4404 Sep 26 j 05:31	0°♂	
	-4404 Nov 08 j 03:42	0°♄	
	-4404 Dec 19 j 23:15	0°♂	
	-4403 Jan 30 j 05:15	0°♄	
desc. node	-4403 Feb 16 j 00:49	12°♄11'47	
	-4403 Mar 12 j 23:03	0°♄	
	-4403 Apr 26 j 21:55	0°♄	
retrograde	-4403 Jul 12 j 17:04	29°♄40'50	
min. Earth dist.	-4403 Aug 10 j 12:35	24°♄01'43	0.47797 AU
greatest brilliancy	-4403 Aug 16 j 15:36	21°♄51'02	-2.2m
opposition	-4403 Aug 18 j 14:32	21°♄09'05	-5°-28'-46
direct	-4403 Sep 20 j 19:34	14°♄13'53	
	-4403 Nov 17 j 01:00	0°♄	
asc. node	-4402 Jan 01 j 03:36	23°♄13'56	
	-4402 Jan 13 j 03:55	0°♄	
	-4402 Mar 05 j 05:45	0°♄	
	-4402 Apr 23 j 08:18	0°♄	
	-4402 Jun 09 j 19:37	0°♂	
evening set	-4402 Jun 18 j 01:55	5°♂20'26	
max. Earth dist.	-4402 Jul 10 j 21:40	20°♂18'40	2.59697 AU
	-4402 Jul 25 j 09:45	0°♄	
conjunction	-4402 Aug 04 j 12:30	6°♄50'42	1°10'28
minimum elong	-4402 Aug 04 j 12:55	6°♄51'23	1°10'40
	-4402 Sep 06 j 23:12	0°♂	
morning rise	-4402 Sep 21 j 19:29	10°♂32'22	
	-4402 Oct 18 j 15:53	0°♄	
	-4402 Nov 27 j 21:28	0°♂	
desc. node	-4401 Jan 03 j 23:36	28°♂15'05	
	-4401 Jan 06 j 06:26	0°♄	
	-4401 Feb 14 j 13:32	0°♄	
	-4401 Mar 26 j 20:29	0°♄	
	-4401 May 08 j 20:35	0°♄	
	-4401 Jun 28 j 06:17	0°♄	
retrograde	-4401 Aug 25 j 11:05	17°♄32'30	
min. Earth dist.	-4401 Sep 28 j 14:43	9°♄48'28	0.59436 AU
opposition	-4401 Oct 03 j 23:42	7°♄40'55	-1°-54'-3
greatest brilliancy	-4401 Oct 03 j 11:45	7°♄52'45	-1.6m
	-4401 Oct 29 j 08:26	30°♄	
direct	-4401 Nov 10 j 04:02	29°♄04'41	
asc. node	-4401 Nov 19 j 04:20	29°♄34'45	
	-4401 Nov 22 j 12:01	0°♄	
	-4400 Feb 08 j 04:35	0°♄	
	-4400 Apr 01 j 18:20	0°♄	
	-4400 May 20 j 19:08	0°♂	
	-4400 Jul 05 j 18:59	0°♄	
evening set	-4400 Jul 29 j 00:27	15°♄51'42	
max. Earth dist.	-4400 Aug 13 j 03:53	26°♄28'08	2.48945 AU
	-4400 Aug 18 j 03:21	0°♂	
conjunction	-4400 Sep 18 j 20:01	22°♂59'48	0°41'22
minimum elong	-4400 Sep 18 j 21:58	23°♂03'25	0°41'29
	-4400 Sep 28 j 06:20	0°♄	
	-4400 Nov 06 j 18:06	0°♂	
morning rise	-4400 Nov 14 j 19:10	6°♂12'55	
desc. node	-4400 Nov 20 j 20:45	10°♂55'06	
	-4400 Dec 15 j 08:28	0°♄	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 1

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

conjunction	-4400 Sep 18 j 20:01	22°059'48	0°41'22		-4395 Sep 07 j 01:51	0°II	
minimum elong	-4400 Sep 18 j 21:58	23°003'25	0°41'29		-4395 Nov 15 j 04:24	0°☾	
	-4400 Sep 28 j 06:20	0°☿		retrograde	-4395 Dec 11 j 00:48	3°☾39'21	
	-4400 Nov 06 j 18:06	0°♊			-4394 Jan 04 j 00:57	30°♊II	
morning rise	-4400 Nov 14 j 19:10	6°♊12'55		opposition	-4394 Jan 17 j 17:20	25°II13'01	5°05'06
desc. node	-4400 Nov 20 j 20:45	10°♊55'06		greatest brilliancy	-4394 Jan 19 j 00:23	24°II43'22	-1.5m
	-4400 Dec 15 j 08:28	0°♋		min. Earth dist.	-4394 Jan 23 j 14:52	22°II58'04	0.60673 AU
	-4399 Jan 22 j 21:12	0°♌		direct	-4394 Feb 27 j 14:28	15°II22'18	
	-4399 Mar 03 j 05:43	0°♍			-4394 Apr 22 j 11:49	0°☾	
	-4399 Apr 13 j 09:40	0°♎			-4394 Jun 14 j 07:45	0°♏	
	-4399 May 27 j 15:45	0°♏		desc. node	-4394 Jul 13 j 13:18	19°♏45'46	
	-4399 Jul 17 j 01:49	0°♐			-4394 Jul 27 j 21:27	0°☿	
retrograde	-4399 Sep 29 j 15:06	24°♐36'50			-4394 Sep 06 j 01:01	0°♊	
asc. node	-4399 Oct 06 j 06:05	24°♐19'22			-4394 Oct 14 j 19:58	0°♋	
min. Earth dist.	-4399 Nov 07 j 00:29	15°♐25'29	0.66091 AU		-4394 Nov 22 j 13:47	0°♌	
opposition	-4399 Nov 08 j 16:55	14°♐44'50	1°15'38		-4393 Jan 01 j 06:09	0°♍	
greatest brilliancy	-4399 Nov 08 j 13:31	14°♐48'16	-1.3m	evening set	-4393 Jan 26 j 03:41	18°♍14'18	
direct	-4399 Dec 18 j 11:25	5°♐12'28			-4393 Feb 11 j 13:59	0°♎	
	-4398 Mar 06 j 21:29	0°♑					
	-4398 Apr 29 j 19:46	0°♒		conjunction	-4393 Mar 23 j 14:51	27°♒46'52	0°-36'-52
	-4398 Jun 16 j 06:54	0°☾		minimum elong	-4393 Mar 23 j 16:32	27°♒49'43	0°37'00
	-4398 Jul 29 j 23:46	0°♏			-4393 Mar 26 j 21:23	0°♑	
	-4398 Sep 08 j 23:47	0°☿		max. Earth dist.	-4393 Apr 18 j 13:46	15°♑11'14	2.59058 AU
evening set	-4398 Sep 18 j 14:16	7°☿15'10			-4393 May 11 j 03:27	0°♐	
desc. node	-4398 Oct 08 j 17:55	22°☿41'40		morning rise	-4393 May 14 j 18:51	2°♐21'55	
	-4398 Oct 18 j 03:59	0°♊		asc. node	-4393 May 29 j 03:42	11°♐38'14	
max. Earth dist.	-4398 Nov 06 j 08:35	15°♊00'17	2.37813 AU		-4393 Jun 27 j 00:38	0°♑	
					-4393 Aug 14 j 08:29	0°♒	
conjunction	-4398 Nov 18 j 18:07	24°♊45'10	0°-28'-54		-4393 Oct 03 j 20:00	0°☾	
minimum elong	-4398 Nov 18 j 15:43	24°♊40'27	0°28'57		-4393 Nov 29 j 23:57	0°♏	
	-4398 Nov 25 j 10:05	0°♋		retrograde	-4392 Jan 29 j 10:48	16°♏29'56	
morning rise	-4397 Jan 02 j 15:57	0°♌		opposition	-4392 Mar 03 j 20:25	9°♏35'31	4°29'45
	-4397 Jan 25 j 11:44	17°♌37'42		greatest brilliancy	-4392 Mar 05 j 19:07	8°♏55'18	-2.1m
	-4397 Feb 10 j 18:36	0°♍		min. Earth dist.	-4392 Mar 12 j 07:29	6°♏41'28	0.49157 AU
	-4397 Mar 23 j 13:10	0°♎		direct	-4392 Apr 10 j 20:13	1°♏07'04	
	-4397 May 05 j 16:05	0°♏		desc. node	-4392 May 30 j 14:38	15°♏01'29	
	-4397 Jun 20 j 22:51	0°♐			-4392 Jun 26 j 14:21	0°☿	
	-4397 Aug 11 j 14:15	0°♑			-4392 Aug 10 j 09:36	0°♊	
asc. node	-4397 Aug 24 j 06:55	6°♑31'52			-4392 Sep 20 j 08:20	0°♋	
retrograde	-4397 Nov 03 j 12:09	28°♑22'36			-4392 Oct 30 j 13:28	0°♌	
opposition	-4397 Dec 12 j 22:37	19°♑01'28	3°38'57		-4392 Dec 10 j 10:44	0°♍	
greatest brilliancy	-4397 Dec 13 j 05:04	18°♑55'05	-1.3m		-4391 Jan 21 j 19:05	0°♎	
min. Earth dist.	-4397 Dec 15 j 01:11	18°♑11'20	0.66570 AU		-4391 Mar 06 j 21:34	0°♏	
direct	-4396 Jan 23 j 01:06	9°♑02'38		evening set	-4391 Mar 16 j 04:28	6°♑10'24	
	-4396 Apr 01 j 10:12	0°♒		asc. node	-4391 Apr 15 j 00:02	25°♑43'18	
	-4396 May 24 j 07:31	0°☾			-4391 Apr 21 j 14:23	0°♐	
	-4396 Jul 08 j 13:09	0°♏					
	-4396 Aug 19 j 00:21	0°☿		conjunction	-4391 May 05 j 07:56	8°♐51'50	0°11'31
desc. node	-4396 Aug 25 j 15:15	4°☿58'06		minimum elong	-4391 May 05 j 07:29	8°♐51'05	0°11'31
	-4396 Sep 27 j 07:00	0°♊		behind sun begin	-4391 May 04 j 17:33	8°♐28'42	
	-4396 Nov 04 j 13:23	0°♋		behind sun end	-4391 May 05 j 21:24	9°♐13'29	
greatest brilliancy	-4396 Nov 16 j 01:52	9°♋03'50	1.2m	max. Earth dist.	-4391 May 13 j 21:27	14°♐21'53	2.65670 AU
evening set	-4396 Nov 22 j 17:30	14°♋17'19			-4391 Jun 07 j 08:23	0°♑	
	-4396 Dec 12 j 20:13	0°♌		morning rise	-4391 Jun 21 j 10:31	8°♑58'18	
	-4395 Jan 21 j 01:14	0°♍			-4391 Jul 24 j 12:21	0°♎	
					-4391 Sep 09 j 17:01	0°☾	
conjunction	-4395 Jan 26 j 11:24	4°♍03'45	-1°-7'-59		-4391 Oct 27 j 02:22	0°♏	
minimum elong	-4395 Jan 26 j 11:46	4°♍04'26	1°08'13		-4391 Dec 14 j 17:25	0°☿	
	-4395 Mar 02 j 21:57	0°♎			-4390 Feb 06 j 12:45	0°♊	
max. Earth dist.	-4395 Mar 13 j 06:11	7°♎21'54	2.47586 AU	retrograde	-4390 Apr 10 j 01:18	18°♊39'26	
morning rise	-4395 Mar 28 j 23:43	18°♎23'15		desc. node	-4390 Apr 17 j 16:40	18°♊17'01	
	-4395 Apr 14 j 21:26	0°♏		opposition	-4390 May 10 j 12:56	13°♊34'59	-1°-42'-19
	-4395 May 30 j 05:05	0°♐		greatest brilliancy	-4390 May 10 j 17:58	13°♊31'35	-2.8m
asc. node	-4395 Jul 11 j 05:41	26°♐24'56		min. Earth dist.	-4390 May 13 j 09:16	12°♊48'44	0.38283 AU
	-4395 Jul 17 j 02:55	0°♑		direct	-4390 Jun 10 j 18:53	8°♊11'33	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 2

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4390 Aug 14 j 13:01	0°♌		conjunction	-4385 Aug 31 j 12:05	3°♌44'35	0°58'07
	-4390 Oct 02 j 06:30	0°♊		minimum elong	-4385 Aug 31 j 13:44	3°♌47'32	0°58'17
	-4390 Nov 16 j 08:33	0°♊			-4385 Oct 06 j 13:19	0°♐	
	-4390 Dec 31 j 07:47	0°♐		morning rise	-4385 Oct 23 j 04:41	12°♐26'54	
	-4389 Feb 15 j 03:31	0°♋			-4385 Nov 15 j 06:52	0°♑	
asc. node	-4389 Mar 02 j 20:14	10°♋07'42		desc. node	-4385 Dec 08 j 15:19	17°♑59'34	
	-4389 Apr 02 j 21:29	0°♑			-4385 Dec 24 j 02:54	0°♌	
evening set	-4389 Apr 26 j 13:04	15°♑02'40			-4384 Jan 31 j 20:43	0°♊	
	-4389 May 20 j 01:46	0°♋			-4384 Mar 11 j 10:29	0°♊	
max. Earth dist.	-4389 Jun 06 j 16:25	11°♋13'14	2.66884 AU		-4384 Apr 21 j 23:46	0°♐	
					-4384 Jun 06 j 09:00	0°♋	
conjunction	-4389 Jun 12 j 17:16	15°♋04'37	0°51'12		-4384 Aug 01 j 08:03	0°♑	
minimum elong	-4389 Jun 12 j 15:59	15°♋02'34	0°51'20	retrograde	-4384 Sep 16 j 00:35	11°♑04'15	
	-4389 Jul 05 j 23:09	0°♐		asc. node	-4384 Oct 22 j 20:47	2°♑23'48	
morning rise	-4389 Jul 28 j 00:45	14°♐18'06		min. Earth dist.	-4384 Oct 22 j 21:34	2°♑23'01	0.64199 AU
	-4389 Aug 20 j 23:09	0°♑		opposition	-4384 Oct 26 j 00:58	1°♑07'18	0°07'29
	-4389 Oct 04 j 19:20	0°♌		greatest brilliancy	-4384 Oct 26 j 00:21	1°♑07'55	-1.4m
	-4389 Nov 17 j 13:44	0°♐			-4384 Oct 28 j 20:20	30°♋	
	-4389 Dec 30 j 13:51	0°♑		direct	-4384 Dec 03 j 22:35	21°♋52'50	
	-4388 Feb 11 j 12:41	0°♌			-4383 Jan 13 j 03:37	0°♑	
desc. node	-4388 Mar 04 j 17:21	15°♌10'22			-4383 Mar 17 j 19:40	0°♋	
	-4388 Mar 27 j 07:49	0°♊			-4383 May 08 j 01:59	0°♐	
	-4388 May 23 j 13:10	0°♊			-4383 Jun 23 j 19:12	0°♑	
retrograde	-4388 Jun 21 j 07:30	5°♊24'46			-4383 Aug 06 j 07:14	0°♌	
min. Earth dist.	-4388 Jul 18 j 09:52	0°♊33'50	0.42908 AU	evening set	-4383 Aug 27 j 20:34	15°♌34'17	
	-4388 Jul 20 j 04:27	30°♋			-4383 Sep 16 j 07:39	0°♐	
greatest brilliancy	-4388 Jul 23 j 23:23	28°♊46'06	-2.5m	max. Earth dist.	-4383 Sep 17 j 17:10	1°♐02'51	2.41380 AU
opposition	-4388 Jul 26 j 01:57	28°♊04'53	-6°-22'-56				
direct	-4388 Aug 26 j 13:02	22°♊02'52		conjunction	-4383 Oct 23 j 22:04	28°♐42'18	0°01'10
	-4388 Oct 03 j 09:24	0°♊		minimum elong	-4383 Oct 23 j 22:11	28°♐42'31	0°01'10
	-4388 Dec 03 j 02:21	0°♐		behind sun begin	-4383 Oct 22 j 20:35	27°♐52'57	
asc. node	-4387 Jan 17 j 18:58	26°♐50'15		behind sun end	-4383 Oct 24 j 23:47	29°♐32'07	
	-4387 Jan 23 j 00:54	0°♋		desc. node	-4383 Oct 25 j 11:52	29°♐55'34	
	-4387 Mar 13 j 04:56	0°♑			-4383 Oct 25 j 14:09	0°♑	
	-4387 Apr 30 j 12:30	0°♋			-4383 Dec 02 j 22:41	0°♌	
evening set	-4387 Jun 02 j 23:15	21°♋10'09		morning rise	-4383 Dec 27 j 14:10	19°♌20'11	
	-4387 Jun 16 j 17:07	0°♐			-4382 Jan 10 j 06:18	0°♊	
max. Earth dist.	-4387 Jun 30 j 10:50	8°♐54'56	2.62721 AU		-4382 Feb 18 j 09:52	0°♊	
					-4382 Mar 31 j 05:39	0°♐	
conjunction	-4387 Jul 19 j 18:56	21°♐38'17	1°10'45		-4382 May 13 j 14:06	0°♋	
minimum elong	-4387 Jul 19 j 18:35	21°♐37'43	1°10'57		-4382 Jun 29 j 18:00	0°♑	
	-4387 Aug 01 j 07:49	0°♑			-4382 Aug 24 j 11:09	0°♋	
morning rise	-4387 Sep 04 j 10:28	23°♑15'22		asc. node	-4382 Sep 09 j 21:49	6°♋50'43	
	-4387 Sep 14 j 02:55	0°♌		retrograde	-4382 Oct 20 j 19:05	15°♋29'25	
	-4387 Oct 26 j 04:54	0°♐		opposition	-4382 Nov 29 j 14:42	5°♋53'24	2°49'04
	-4387 Dec 05 j 21:55	0°♑		greatest brilliancy	-4382 Nov 29 j 14:57	5°♋53'09	-1.3m
	-4386 Jan 14 j 19:18	0°♌		min. Earth dist.	-4382 Nov 30 j 05:30	5°♋38'36	0.67154 AU
desc. node	-4386 Jan 20 j 16:56	4°♌27'21			-4382 Dec 15 j 11:54	30°♋	
	-4386 Feb 23 j 16:31	0°♊		direct	-4381 Jan 09 j 08:32	26°♑01'25	
	-4386 Apr 05 j 20:32	0°♊			-4381 Feb 05 j 09:37	0°♋	
	-4386 May 21 j 00:52	0°♐			-4381 Apr 14 j 07:23	0°♐	
	-4386 Jul 29 j 00:09	0°♋			-4381 Jun 03 j 02:44	0°♑	
retrograde	-4386 Aug 09 j 19:33	0°♋56'54			-4381 Jul 17 j 12:52	0°♌	
	-4386 Aug 21 j 06:33	30°♋			-4381 Aug 27 j 17:42	0°♐	
min. Earth dist.	-4386 Sep 10 j 22:58	23°♋57'21	0.55332 AU	desc. node	-4381 Sep 12 j 09:13	11°♐50'30	
opposition	-4386 Sep 17 j 15:37	21°♋22'21	-3°-18'-35		-4381 Oct 05 j 22:08	0°♑	
greatest brilliancy	-4386 Sep 16 j 14:40	21°♋46'29	-1.8m	evening set	-4381 Oct 27 j 15:15	17°♑00'04	
direct	-4386 Oct 23 j 11:03	13°♋19'00			-4381 Nov 13 j 03:18	0°♌	
asc. node	-4386 Dec 05 j 19:43	22°♋53'02			-4381 Dec 21 j 08:44	0°♊	
	-4386 Dec 22 j 19:03	0°♋					
	-4385 Feb 18 j 14:53	0°♑		conjunction	-4380 Jan 01 j 01:51	8°♊18'40	-1°-3'-4
	-4385 Apr 10 j 19:26	0°♋		minimum elong	-4381 Dec 31 j 23:36	8°♊14'20	1°03'16
	-4385 May 29 j 01:39	0°♐			-4380 Jan 29 j 11:45	0°♊	
evening set	-4385 Jul 12 j 23:10	29°♐24'27		max. Earth dist.	-4380 Feb 19 j 05:44	15°♊26'48	2.42391 AU
	-4385 Jul 13 j 20:18	0°♑		morning rise	-4380 Mar 06 j 15:52	27°♊24'39	
max. Earth dist.	-4385 Jul 30 j 01:55	11°♑02'20	2.53607 AU		-4380 Mar 10 j 06:14	0°♐	
	-4385 Aug 26 j 05:50	0°♌			-4380 Apr 22 j 05:04	0°♋	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 3

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4380 Jun 06 j 17:24	0°♊			-4375 Oct 14 j 13:25	0°♊		
	-4380 Jul 25 j 12:07	0°♋			-4375 Nov 26 j 05:11	0°♋		
asc. node	-4380 Jul 27 j 21:40	1°♋24'23			-4374 Jan 08 j 18:54	0°♌		
	-4380 Sep 19 j 00:10	0°♍			-4374 Feb 22 j 17:52	0°♌		
retrograde	-4380 Nov 25 j 05:53	19°♍36'23		asc. node	-4374 Mar 19 j 13:15	16°♌11'04		
opposition	-4379 Jan 02 j 18:30	10°♍45'08	4°40'16		-4374 Apr 09 j 23:16	0°♎		
greatest brilliancy	-4379 Jan 03 j 14:57	10°♍25'15	-1.4m	evening set	-4374 Apr 11 j 01:14	0°♎41'41		
min. Earth dist.	-4379 Jan 07 j 04:52	9°♍01'41	0.63758 AU		-4374 May 26 j 21:46	0°♏		
direct	-4379 Feb 12 j 23:17	0°♍45'30		max. Earth dist.	-4374 May 28 j 11:39	1°♏00'24	2.67047 AU	
	-4379 May 07 j 05:48	0°♐						
	-4379 Jun 24 j 08:34	0°♑		conjunction	-4374 May 29 j 01:53	1°♏23'05	0°37'38	
desc. node	-4379 Jul 30 j 08:07	25°♑17'51		minimum elong	-4374 May 29 j 00:42	1°♏21'11	0°37'44	
	-4379 Aug 05 j 18:09	0°♒			-4374 Jul 12 j 20:02	0°♒		
	-4379 Sep 14 j 10:08	0°♓		morning rise	-4374 Jul 13 j 18:23	0°♒35'53		
	-4379 Oct 22 j 21:51	0°♓			-4374 Aug 28 j 04:18	0°♑		
	-4379 Nov 30 j 09:25	0°♊			-4374 Oct 12 j 18:03	0°♑		
evening set	-4378 Jan 02 j 18:54	25°♊28'59			-4374 Nov 26 j 17:50	0°♒		
	-4378 Jan 08 j 19:32	0°♋			-4373 Jan 10 j 17:05	0°♓		
	-4378 Feb 18 j 21:15	0°♌			-4373 Feb 26 j 05:37	0°♓		
				desc. node	-4373 Mar 22 j 10:11	14°♓17'04		
conjunction	-4378 Mar 03 j 17:16	9°♌05'10	0°-53'-32		-4373 Apr 24 j 02:15	0°♊		
minimum elong	-4378 Mar 03 j 19:24	9°♌08'55	0°53'41	retrograde	-4373 May 28 j 01:28	7°♊04'07		
	-4378 Apr 02 j 23:55	0°♌		min. Earth dist.	-4373 Jun 23 j 23:20	2°♊37'28	0.39094 AU	
max. Earth dist.	-4378 Apr 06 j 10:46	2°♌20'27	2.55066 AU	greatest brilliancy	-4373 Jun 27 j 19:10	1°♊32'16	-2.8m	
morning rise	-4378 Apr 28 j 00:30	16°♌46'37		opposition	-4373 Jun 29 j 05:02	1°♊08'02	-6°-2'-55	
	-4378 May 18 j 04:28	0°♎			-4373 Jul 03 j 05:28	30°♌		
asc. node	-4378 Jun 14 j 19:02	17°♎43'17		direct	-4373 Jul 29 j 07:40	25°♌54'28		
	-4378 Jul 04 j 07:20	0°♏			-4373 Aug 24 j 07:02	0°♊		
	-4378 Aug 22 j 12:59	0°♐			-4373 Oct 26 j 22:16	0°♋		
	-4378 Oct 14 j 22:33	0°♑			-4373 Dec 15 j 17:37	0°♌		
retrograde	-4377 Jan 08 j 05:28	28°♑31'32			-4372 Feb 01 j 20:11	0°♌		
opposition	-4377 Feb 13 j 03:23	20°♑55'26	5°07'06	asc. node	-4372 Feb 04 j 10:26	1°♌37'24		
greatest brilliancy	-4377 Feb 15 j 00:38	20°♑14'17	-1.8m		-4372 Mar 20 j 18:50	0°♎		
min. Earth dist.	-4377 Feb 20 j 23:08	18°♑05'15	0.54192 AU		-4372 May 07 j 12:56	0°♏		
direct	-4377 Mar 24 j 17:21	11°♑41'11		evening set	-4372 May 19 j 02:20	7°♏18'55		
	-4377 May 23 j 06:57	0°♒		max. Earth dist.	-4372 Jun 20 j 15:31	28°♏07'31	2.64963 AU	
desc. node	-4377 Jun 17 j 07:37	14°♒22'27			-4372 Jun 23 j 13:13	0°♐		
	-4377 Jul 11 j 06:47	0°♒						
	-4377 Aug 22 j 04:40	0°♓		conjunction	-4372 Jul 04 j 17:56	7°♐15'40	1°06'14	
	-4377 Sep 30 j 21:42	0°♓		minimum elong	-4372 Jul 04 j 17:01	7°♐14'11	1°06'25	
	-4377 Nov 09 j 07:34	0°♊			-4372 Aug 08 j 06:04	0°♑		
	-4377 Dec 19 j 13:38	0°♋		morning rise	-4372 Aug 19 j 10:44	7°♑30'30		
	-4376 Jan 30 j 09:20	0°♌			-4372 Sep 21 j 08:58	0°♑		
evening set	-4376 Feb 27 j 02:55	19°♌11'20			-4372 Nov 02 j 23:18	0°♒		
	-4376 Mar 14 j 02:05	0°♌			-4372 Dec 14 j 08:14	0°♓		
					-4371 Jan 24 j 00:09	0°♓		
conjunction	-4376 Apr 19 j 07:22	23°♌59'25	0°-7'-5	desc. node	-4371 Feb 06 j 10:01	9°♓54'19		
minimum elong	-4376 Apr 19 j 07:39	23°♌59'54	0°07'08		-4371 Mar 05 j 20:59	0°♊		
behind sun begin	-4376 Apr 18 j 12:49	23°♌29'08			-4371 Apr 17 j 19:08	0°♋		
behind sun end	-4376 Apr 20 j 02:29	24°♌30'39			-4371 Jun 08 j 06:04	0°♌		
	-4376 Apr 28 j 12:46	0°♎		retrograde	-4371 Jul 23 j 12:42	12°♌05'39		
asc. node	-4376 May 01 j 16:15	2°♎02'28		min. Earth dist.	-4371 Aug 22 j 11:57	5°♌57'20	0.50568 AU	
max. Earth dist.	-4376 May 04 j 08:38	3°♎46'46	2.63701 AU	greatest brilliancy	-4371 Aug 28 j 14:30	3°♌42'20	-2.1m	
morning rise	-4376 Jun 06 j 23:04	25°♎21'28		opposition	-4371 Aug 30 j 06:11	3°♌05'36	-4°-44'-10	
	-4376 Jun 14 j 05:59	0°♏			-4371 Sep 08 j 02:30	30°♌		
	-4376 Jul 31 j 17:14	0°♐		direct	-4371 Oct 03 j 11:15	25°♋43'46		
	-4376 Sep 17 j 18:50	0°♑			-4371 Oct 30 j 18:31	0°♌		
	-4376 Nov 06 j 05:17	0°♒		asc. node	-4371 Dec 22 j 10:07	22°♌20'32		
	-4376 Dec 30 j 12:17	0°♒			-4370 Jan 05 j 22:35	0°♌		
retrograde	-4375 Mar 10 j 00:59	21°♒22'55			-4370 Feb 27 j 16:27	0°♎		
opposition	-4375 Apr 10 j 20:30	15°♒44'12	1°36'23		-4370 Apr 18 j 09:55	0°♏		
greatest brilliancy	-4375 Apr 11 j 13:18	15°♒31'41	-2.6m		-4370 Jun 05 j 03:35	0°♐		
min. Earth dist.	-4375 Apr 17 j 17:09	13°♒42'28	0.41492 AU	evening set	-4370 Jun 26 j 22:04	14°♐07'39		
desc. node	-4375 May 04 j 08:18	9°♒54'21		max. Earth dist.	-4370 Jul 17 j 11:20	27°♐45'32	2.57700 AU	
direct	-4375 May 14 j 19:57	9°♒09'00			-4370 Jul 20 j 19:24	0°♑		
	-4375 Jul 16 j 02:16	0°♓						
	-4375 Sep 01 j 12:14	0°♓		conjunction	-4370 Aug 13 j 22:40	16°♑27'46	1°07'47	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 4

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

minimum elong	-4370 Aug 13 j 23:34	16°☿29'19	1°07'59			-4365 Oct 08 j 00:17	0°♊	
	-4370 Sep 02 j 07:38	0°♊		retrograde		-4365 Nov 11 j 14:18	6°♊17'20	
morning rise	-4370 Oct 02 j 12:49	21°♊41'19				-4365 Dec 13 j 04:55	30°♊8	
	-4370 Oct 13 j 20:56	0°♊		opposition		-4365 Dec 20 j 18:12	27°♊05'50	4°04'08
	-4370 Nov 22 j 21:57	0°♊		greatest brilliancy		-4365 Dec 21 j 05:11	26°♊55'00	-1.3m
desc. node	-4370 Dec 25 j 08:30	24°♊49'57		min. Earth dist.		-4365 Dec 23 j 16:48	25°♊56'11	0.65842 AU
	-4369 Jan 01 j 01:35	0°♊		direct		-4364 Jan 30 j 23:11	17°♊04'57	
	-4369 Feb 09 j 02:54	0°♊				-4364 Mar 22 j 15:47	0°♊	
	-4369 Mar 21 j 01:42	0°♊				-4364 May 18 j 04:14	0°♊	
	-4369 May 02 j 08:12	0°♊				-4364 Jul 03 j 05:19	0°♊	
	-4369 Jun 19 j 00:04	0°♊				-4364 Aug 13 j 23:28	0°♊	
retrograde	-4369 Sep 02 j 22:20	26°♊42'47		desc. node		-4364 Aug 16 j 00:51	1°♊31'54	
min. Earth dist.	-4369 Oct 08 j 02:31	18°♊36'31	0.61387 AU			-4364 Sep 22 j 09:09	0°♊	
opposition	-4369 Oct 12 j 16:20	16°♊47'01	-1°-7'-39			-4364 Oct 30 j 17:02	0°♊	
greatest brilliancy	-4369 Oct 12 j 10:10	16°♊53'10	-1.5m	evening set		-4364 Dec 07 j 23:31	29°♊57'05	
asc. node	-4369 Nov 09 j 11:23	8°♊35'16				-4364 Dec 08 j 01:02	0°♊	
direct	-4369 Nov 19 j 12:20	7°♊55'29				-4363 Jan 16 j 07:10	0°♊	
	-4368 Jan 31 j 05:35	0°♊						
	-4368 Mar 27 j 02:50	0°♊		conjunction		-4363 Feb 09 j 07:31	17°♊47'14	-1°-5'-11
	-4368 May 15 j 20:08	0°♊		minimum elong		-4363 Feb 09 j 08:59	17°♊49'56	1°05'25
	-4368 Jul 01 j 02:05	0°♊				-4363 Feb 26 j 04:38	0°♊	
evening set	-4368 Aug 08 j 06:50	26°♊17'42		max. Earth dist.		-4363 Mar 22 j 22:40	17°♊27'57	2.50388 AU
	-4368 Aug 13 j 12:13	0°♊		morning rise		-4363 Apr 09 j 11:32	29°♊31'51	
max. Earth dist.	-4368 Aug 23 j 13:47	7°♊12'26	2.46240 AU			-4363 Apr 10 j 04:05	0°♊	
	-4368 Sep 23 j 14:38	0°♊				-4363 May 25 j 08:56	0°♊	
				asc. node		-4363 Jul 01 j 11:36	23°♊33'47	
conjunction	-4368 Sep 30 j 17:37	5°♊20'36	0°28'35			-4363 Jul 11 j 21:23	0°♊	
minimum elong	-4368 Sep 30 j 19:18	5°♊23'47	0°28'40			-4363 Aug 31 j 13:05	0°♊	
	-4368 Nov 02 j 00:37	0°♊				-4363 Oct 30 j 01:12	0°♊	
desc. node	-4368 Nov 11 j 07:01	7°♊10'55		retrograde		-4363 Dec 20 j 16:43	12°♊33'46	
morning rise	-4368 Nov 29 j 11:44	21°♊21'58		opposition		-4362 Jan 26 j 19:54	4°♊23'26	5°11'52
	-4368 Dec 10 j 12:29	0°♊		greatest brilliancy		-4362 Jan 28 j 08:46	3°♊48'42	-1.6m
greatest brilliancy	-4367 Jan 01 j 12:56	17°♊13'41	1.2m	min. Earth dist.		-4362 Feb 02 j 11:32	1°♊53'17	0.58605 AU
	-4367 Jan 17 j 22:39	0°♊				-4362 Feb 07 j 17:43	30°♊♊	
	-4367 Feb 26 j 04:15	0°♊		direct		-4362 Mar 08 j 09:10	24°♊41'36	
	-4367 Apr 08 j 03:19	0°♊				-4362 Apr 07 j 15:11	0°♊	
	-4367 May 21 j 22:07	0°♊				-4362 Jun 07 j 03:59	0°♊	
	-4367 Jul 09 j 15:45	0°♊		desc. node		-4362 Jul 04 j 00:15	17°♊28'19	
	-4367 Sep 16 j 08:05	0°♊				-4362 Jul 21 j 23:15	0°♊	
asc. node	-4367 Sep 26 j 11:48	1°♊52'21				-4362 Aug 31 j 14:11	0°♊	
retrograde	-4367 Oct 07 j 09:20	2°♊36'19				-4362 Oct 09 j 15:00	0°♊	
	-4367 Oct 27 j 02:37	30°♊♊				-4362 Nov 17 j 12:57	0°♊	
opposition	-4367 Nov 16 j 09:47	22°♊48'58	1°52'06			-4362 Dec 27 j 08:48	0°♊	
greatest brilliancy	-4367 Nov 16 j 06:41	22°♊52'05	-1.3m			-4361 Feb 06 j 19:29	0°♊	
min. Earth dist.	-4367 Nov 15 j 13:07	23°♊09'43	0.66750 AU	evening set		-4361 Feb 07 j 07:58	0°♊22'05	
direct	-4367 Dec 26 j 13:35	13°♊08'22				-4361 Mar 22 j 05:07	0°♊	
	-4366 Feb 26 j 07:10	0°♊						
	-4366 Apr 24 j 01:02	0°♊		conjunction		-4361 Apr 03 j 02:32	7°♊59'41	0°-26'-9
	-4366 Jun 11 j 05:12	0°♊		minimum elong		-4361 Apr 03 j 03:45	8°♊01'41	0°26'15
	-4366 Jul 25 j 04:08	0°♊		max. Earth dist.		-4361 Apr 24 j 23:18	22°♊28'22	2.60941 AU
	-4366 Sep 04 j 06:12	0°♊				-4361 May 06 j 11:43	0°♊	
desc. node	-4366 Sep 29 j 03:50	18°♊56'20		asc. node		-4361 May 19 j 08:51	8°♊20'38	
evening set	-4366 Oct 01 j 22:57	21°♊05'37		morning rise		-4361 May 23 j 20:23	11°♊13'51	
	-4366 Oct 13 j 10:48	0°♊				-4361 Jun 22 j 06:22	0°♊	
	-4366 Nov 20 j 16:28	0°♊				-4361 Aug 09 j 04:45	0°♊	
						-4361 Sep 27 j 13:39	0°♊	
conjunction	-4366 Dec 04 j 04:16	10°♊37'28	0°-44'-14			-4361 Nov 19 j 16:27	0°♊	
minimum elong	-4366 Dec 04 j 01:00	10°♊31'04	0°44'20	retrograde		-4360 Feb 11 j 22:30	28°♊22'29	
	-4366 Dec 28 j 21:43	0°♊		opposition		-4360 Mar 16 j 11:01	21°♊53'53	3°45'49
max. Earth dist.	-4365 Jan 01 j 02:30	2°♊29'22	2.38062 AU	greatest brilliancy		-4360 Mar 18 j 04:01	21°♊19'59	-2.3m
	-4365 Feb 05 j 23:40	0°♊		min. Earth dist.		-4360 Mar 24 j 19:30	19°♊09'19	0.46307 AU
morning rise	-4365 Feb 10 j 02:31	3°♊06'00		direct		-4360 Apr 22 j 04:57	14°♊00'23	
	-4365 Mar 18 j 16:49	0°♊		desc. node		-4360 May 21 j 01:08	19°♊14'33	
	-4365 Apr 30 j 16:29	0°♊				-4360 Jun 14 j 18:09	0°♊	
	-4365 Jun 15 j 13:22	0°♊				-4360 Aug 02 j 15:52	0°♊	
	-4365 Aug 04 j 18:34	0°♊				-4360 Sep 13 j 21:22	0°♊	
asc. node	-4365 Aug 14 j 11:54	5°♊20'20				-4360 Oct 24 j 18:45	0°♊	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 5

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4360 Dec 05 j 03:01	0°☾				-4355 Oct 21 j 08:04	0°♍		
	-4359 Jan 16 j 19:02	0°♊				-4355 Nov 30 j 19:14	0°♋		
	-4359 Mar 02 j 03:02	0°♈				-4354 Jan 09 j 09:29	0°♌		
evening set	-4359 Mar 25 j 20:53	15°♈38'43		desc. node		-4354 Jan 11 j 03:33	1°♌20'05		
asc. node	-4359 Apr 05 j 05:12	22°♈23'22				-4354 Feb 17 j 21:48	0°♍		
	-4359 Apr 16 j 23:03	0°♎				-4354 Mar 30 j 11:29	0°☾		
						-4354 May 13 j 02:34	0°♊		
conjunction	-4359 May 14 j 03:04	17°♎27'54	0°21'39			-4354 Jul 05 j 16:57	0°♈		
minimum elong	-4359 May 14 j 02:16	17°♎26'37	0°21'41	retrograde		-4354 Aug 18 j 23:24	11°♈05'39		
max. Earth dist.	-4359 May 19 j 09:04	20°♎49'21	2.66391 AU	min. Earth dist.		-4354 Sep 21 j 05:45	3°♈40'24	0.57685 AU	
	-4359 Jun 02 j 17:59	0°♉		greatest brilliancy		-4354 Sep 26 j 11:49	1°♈36'49	-1.7m	
morning rise	-4359 Jun 29 j 14:27	17°♉07'00		opposition		-4354 Sep 27 j 04:58	1°♈19'58	-2°-29'-18	
	-4359 Jul 19 j 19:13	0°♊				-4354 Sep 30 j 15:22	30°♊		
	-4359 Sep 04 j 15:14	0°☾		direct		-4354 Nov 02 j 18:50	22°♊57'25		
	-4359 Oct 21 j 05:41	0°♋		asc. node		-4354 Nov 26 j 01:11	26°♊02'47		
	-4359 Dec 07 j 03:37	0°♌				-4354 Dec 09 j 09:39	0°♈		
	-4358 Jan 25 j 00:43	0°♋				-4353 Feb 12 j 00:48	0°♎		
	-4358 Mar 26 j 11:19	0°♌				-4353 Apr 05 j 12:22	0°♉		
desc. node	-4358 Apr 08 j 01:47	3°♌42'38				-4353 May 24 j 05:52	0°♊		
retrograde	-4358 Apr 28 j 00:31	6°♌10'40				-4353 Jul 09 j 04:31	0°☾		
opposition	-4358 May 28 j 15:24	1°♌04'52	-3°-41'-56	evening set		-4353 Jul 22 j 12:59	9°☾02'56		
min. Earth dist.	-4358 May 28 j 08:12	1°♌09'40	0.37704 AU	max. Earth dist.		-4353 Aug 07 j 08:33	19°☾58'13	2.51088 AU	
greatest brilliancy	-4358 May 28 j 12:10	1°♌07'01	-2.9m			-4353 Aug 21 j 14:39	0°♋		
	-4358 Jun 01 j 17:39	30°♊							
direct	-4358 Jun 27 j 19:04	26°♊02'09		conjunction		-4353 Sep 11 j 05:24	14°♊49'08	0°49'26	
	-4358 Jul 23 j 01:02	0°♌		minimum elong		-4353 Sep 11 j 07:19	14°♊52'37	0°49'34	
	-4358 Sep 22 j 17:44	0°♍				-4353 Oct 01 j 20:30	0°♎		
	-4358 Nov 09 j 10:30	0°☾		morning rise		-4353 Nov 05 j 03:08	25°♎53'50		
	-4358 Dec 25 j 13:43	0°♊				-4353 Nov 10 j 11:30	0°♋		
	-4357 Feb 10 j 00:32	0°♈		desc. node		-4353 Nov 29 j 00:45	14°♋19'42		
asc. node	-4357 Feb 21 j 02:26	7°♈05'34				-4353 Dec 19 j 04:31	0°♌		
	-4357 Mar 29 j 02:41	0°♎				-4352 Jan 26 j 19:06	0°♍		
evening set	-4357 May 05 j 04:22	23°♎28'41				-4352 Mar 06 j 04:59	0°☾		
	-4357 May 15 j 11:07	0°♉				-4352 Apr 16 j 10:54	0°♊		
max. Earth dist.	-4357 Jun 12 j 02:45	17°♉37'01	2.66440 AU			-4352 May 31 j 00:28	0°♈		
						-4352 Jul 21 j 22:13	0°♎		
conjunction	-4357 Jun 21 j 01:13	23°♉20'45	0°57'42	retrograde		-4352 Sep 23 j 22:05	19°♎21'58		
minimum elong	-4357 Jun 20 j 23:59	23°♉18'46	0°57'51	asc. node		-4352 Oct 13 j 02:49	16°♎50'55		
	-4357 Jul 01 j 09:19	0°♊		min. Earth dist.		-4352 Oct 31 j 15:23	10°♎23'25	0.65355 AU	
morning rise	-4357 Aug 05 j 08:30	22°♊46'59		opposition		-4352 Nov 02 j 23:15	9°♎27'13	0°48'00	
	-4357 Aug 16 j 06:37	0°☾		greatest brilliancy		-4352 Nov 02 j 20:24	9°♎30'05	-1.4m	
	-4357 Sep 29 j 20:18	0°♋		direct		-4352 Dec 12 j 08:21	0°♎02'17		
	-4357 Nov 12 j 03:16	0°♌				-4351 Mar 10 j 23:31	0°♉		
	-4357 Dec 24 j 10:34	0°♋				-4351 May 02 j 17:09	0°♊		
	-4356 Feb 04 j 07:30	0°♌				-4351 Jun 18 j 21:40	0°☾		
desc. node	-4356 Feb 24 j 03:52	14°♌06'08				-4351 Aug 01 j 13:51	0°♋		
	-4356 Mar 18 j 00:50	0°♍		evening set		-4351 Sep 08 j 20:16	27°♋55'01		
	-4356 May 04 j 14:09	0°☾				-4351 Sep 11 j 15:03	0°♎		
retrograde	-4356 Jul 03 j 21:19	20°☾05'50		max. Earth dist.		-4351 Oct 08 j 13:51	20°♎29'31	2.39067 AU	
min. Earth dist.	-4356 Jul 31 j 19:22	14°☾50'11	0.45553 AU	desc. node		-4351 Oct 15 j 21:50	26°♎09'09		
greatest brilliancy	-4356 Aug 06 j 19:47	12°☾46'43	-2.3m			-4351 Oct 20 j 20:56	0°♋		
opposition	-4356 Aug 08 j 22:18	12°☾03'14	-5°-57'-48						
direct	-4356 Sep 10 j 07:57	5°☾31'21		conjunction		-4351 Nov 07 j 03:59	13°♋29'50	0°-15'-58	
	-4356 Nov 24 j 00:06	0°♊		minimum elong		-4351 Nov 07 j 02:38	13°♋27'13	0°16'01	
asc. node	-4355 Jan 08 j 00:51	24°♊53'10		behind sun begin		-4351 Nov 06 j 21:23	13°♋16'56		
	-4355 Jan 16 j 19:33	0°♈		behind sun end		-4351 Nov 07 j 07:54	13°♋37'31		
	-4355 Mar 07 j 23:17	0°♎				-4351 Nov 28 j 04:10	0°♌		
	-4355 Apr 25 j 17:19	0°♉				-4350 Jan 05 j 10:20	0°♍		
evening set	-4355 Jun 11 j 13:53	29°♉40'01		morning rise		-4350 Jan 12 j 22:25	5°♍49'39		
	-4355 Jun 12 j 02:18	0°♊				-4350 Feb 13 j 12:34	0°☾		
max. Earth dist.	-4355 Jul 06 j 12:09	15°♊53'33	2.61154 AU			-4350 Mar 26 j 06:13	0°♊		
	-4355 Jul 27 j 17:30	0°☾				-4350 May 08 j 09:33	0°♈		
						-4350 Jun 23 j 21:50	0°♎		
conjunction	-4355 Jul 28 j 16:03	0°☾37'52	1°11'12			-4350 Aug 15 j 17:38	0°♉		
minimum elong	-4355 Jul 28 j 16:08	0°☾37'59	1°11'26	asc. node		-4350 Aug 31 j 03:53	7°♉26'46		
	-4355 Sep 09 j 10:33	0°♋		retrograde		-4350 Oct 28 j 15:43	23°♉19'43		
morning rise	-4355 Sep 14 j 02:50	3°♋17'28		opposition		-4350 Dec 07 j 06:25	13°♉51'38	3°18'55	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 6

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

greatest brilliancy	-4350 Dec 07 j 09:49	13°♄48'14	-1.3m	asc. node	-4344 Apr 21 j 21:45	28°♄42'02	
min. Earth dist.	-4350 Dec 08 j 17:09	13°♄17'02	0.66955 AU		-4344 Apr 23 j 21:46	0°♄	
direct	-4349 Jan 17 j 05:11	3°♄55'13					
	-4349 Apr 07 j 01:01	0°♄		conjunction	-4344 Apr 28 j 14:25	3°♄02'31	0°03'52
	-4349 May 28 j 12:30	0°♄		minimum elong	-4344 Apr 28 j 14:15	3°♄02'16	0°03'51
	-4349 Jul 12 j 10:58	0°♄		behind sun begin	-4344 Apr 27 j 18:19	2°♄30'01	
	-4349 Aug 22 j 20:26	0°♄		behind sun end	-4344 Apr 29 j 10:11	3°♄34'29	
desc. node	-4349 Sep 02 j 19:10	8°♄14'17		max. Earth dist.	-4344 May 10 j 00:51	10°♄25'20	2.64899 AU
	-4349 Oct 01 j 02:51	0°♄			-4344 Jun 09 j 14:48	0°♄	
	-4349 Nov 08 j 08:45	0°♄		morning rise	-4344 Jun 15 j 07:44	3°♄38'01	
evening set	-4349 Nov 11 j 19:20	2°♄42'40			-4344 Jul 26 j 21:23	0°♄	
	-4349 Dec 16 j 14:25	0°♄			-4344 Sep 12 j 10:20	0°♄	
					-4344 Oct 30 j 14:16	0°♄	
conjunction	-4348 Jan 16 j 05:38	23°♄34'22	-1°-7'-30		-4344 Dec 20 j 01:20	0°♄	
minimum elong	-4348 Jan 16 j 04:53	23°♄32'56	1°07'43		-4343 Feb 20 j 08:06	0°♄	
	-4348 Jan 24 j 17:40	0°♄		retrograde	-4343 Mar 27 j 03:53	6°♄35'43	
max. Earth dist.	-4348 Mar 04 j 10:03	29°♄13'20	2.45250 AU	desc. node	-4343 Apr 24 j 19:43	1°♄57'10	
	-4348 Mar 05 j 12:01	0°♄		opposition	-4343 Apr 27 j 01:07	1°♄20'02	0°-9'-43
morning rise	-4348 Mar 19 j 16:24	10°♄05'46		greatest brilliancy	-4343 Apr 27 j 02:12	1°♄19'17	-2.8m
	-4348 Apr 17 j 09:40	0°♄			-4343 May 01 j 19:24	30°♄	
	-4348 Jun 01 j 17:29	0°♄		min. Earth dist.	-4343 May 02 j 00:33	29°♄56'26	0.39428 AU
asc. node	-4348 Jul 18 j 03:04	28°♄56'05		direct	-4343 May 29 j 11:05	25°♄27'51	
	-4348 Jul 19 j 21:34	0°♄			-4343 Jun 25 j 02:10	0°♄	
	-4348 Sep 10 j 23:01	0°♄			-4343 Aug 22 j 23:18	0°♄	
retrograde	-4348 Dec 04 j 03:16	27°♄59'02			-4343 Oct 07 j 09:28	0°♄	
opposition	-4347 Jan 11 j 05:08	19°♄21'04	4°55'56		-4343 Nov 20 j 04:11	0°♄	
greatest brilliancy	-4347 Jan 12 j 07:28	18°♄55'40	-1.4m		-4342 Jan 03 j 09:49	0°♄	
min. Earth dist.	-4347 Jan 16 j 11:09	17°♄19'38	0.62164 AU		-4342 Feb 17 j 18:42	0°♄	
direct	-4347 Feb 21 j 06:27	9°♄25'09		asc. node	-4342 Mar 09 j 17:34	12°♄57'14	
	-4347 Apr 28 j 18:15	0°♄			-4342 Apr 05 j 06:05	0°♄	
	-4347 Jun 18 j 05:07	0°♄		evening set	-4342 Apr 20 j 00:29	9°♄25'53	
desc. node	-4347 Jul 20 j 17:00	22°♄22'08			-4342 May 22 j 07:33	0°♄	
	-4347 Jul 31 j 06:27	0°♄		max. Earth dist.	-4342 Jun 02 j 20:05	7°♄20'38	2.67068 AU
	-4347 Sep 09 j 05:22	0°♄					
	-4347 Oct 17 j 21:03	0°♄		conjunction	-4342 Jun 06 j 12:24	9°♄41'27	0°45'52
	-4347 Nov 25 j 11:29	0°♄		minimum elong	-4342 Jun 06 j 11:07	9°♄39'24	0°45'58
	-4346 Jan 04 j 00:09	0°♄			-4342 Jul 08 j 05:23	0°♄	
evening set	-4346 Jan 16 j 07:43	9°♄07'14		morning rise	-4342 Jul 21 j 22:16	8°♄50'34	
	-4346 Feb 14 j 03:55	0°♄			-4342 Aug 23 j 09:15	0°♄	
					-4342 Oct 07 j 13:16	0°♄	
conjunction	-4346 Mar 15 j 06:52	20°♄23'56	0°-44'-21		-4342 Nov 20 j 19:45	0°♄	
minimum elong	-4346 Mar 15 j 08:49	20°♄27'19	0°44'29		-4341 Jan 03 j 14:03	0°♄	
	-4346 Mar 29 j 07:49	0°♄			-4341 Feb 16 j 17:24	0°♄	
max. Earth dist.	-4346 Apr 13 j 13:49	10°♄16'24	2.57358 AU	desc. node	-4341 Mar 12 j 20:21	15°♄45'22	
morning rise	-4346 May 07 j 18:18	26°♄15'41			-4341 Apr 05 j 06:36	0°♄	
	-4346 May 13 j 11:49	0°♄		retrograde	-4341 Jun 11 j 19:59	23°♄54'59	
asc. node	-4346 Jun 05 j 01:19	14°♄33'07		min. Earth dist.	-4341 Jul 08 j 13:59	19°♄19'41	0.40983 AU
	-4346 Jun 29 j 10:17	0°♄		greatest brilliancy	-4341 Jul 13 j 13:10	17°♄48'39	-2.6m
	-4346 Aug 17 j 01:38	0°♄		opposition	-4341 Jul 15 j 11:10	17°♄13'09	-6°-27'-17
	-4346 Oct 07 j 12:55	0°♄		direct	-4341 Aug 15 j 05:41	11°♄34'51	
	-4346 Dec 08 j 17:35	0°♄			-4341 Oct 15 j 14:21	0°♄	
retrograde	-4345 Jan 19 j 21:14	8°♄51'34			-4341 Dec 08 j 17:12	0°♄	
opposition	-4345 Feb 23 j 23:28	1°♄37'27	4°50'21	asc. node	-4340 Jan 25 j 15:57	29°♄03'13	
greatest brilliancy	-4345 Feb 25 j 22:41	0°♄55'37	-2.0m		-4340 Jan 27 j 04:56	0°♄	
	-4345 Feb 28 j 13:15	30°♄			-4340 Mar 15 j 18:37	0°♄	
min. Earth dist.	-4345 Mar 04 j 05:40	28°♄42'37	0.51455 AU		-4340 May 02 j 20:07	0°♄	
direct	-4345 Apr 03 j 17:53	22°♄45'46		evening set	-4340 May 27 j 15:17	15°♄41'18	
	-4345 May 08 j 14:01	0°♄			-4340 Jun 18 j 23:15	0°♄	
desc. node	-4345 Jun 07 j 17:39	14°♄23'28		max. Earth dist.	-4340 Jun 26 j 08:11	4°♄46'13	2.63830 AU
	-4345 Jul 03 j 11:59	0°♄					
	-4345 Aug 15 j 18:42	0°♄		conjunction	-4340 Jul 13 j 07:33	15°♄51'14	1°09'23
	-4345 Sep 25 j 02:28	0°♄		minimum elong	-4340 Jul 13 j 06:56	15°♄50'13	1°09'35
	-4345 Nov 03 j 21:28	0°♄			-4340 Aug 03 j 15:37	0°♄	
	-4345 Dec 14 j 10:37	0°♄		morning rise	-4340 Aug 28 j 10:38	16°♄46'05	
	-4344 Jan 25 j 11:52	0°♄			-4340 Sep 16 j 15:00	0°♄	
evening set	-4344 Mar 08 j 15:00	29°♄30'13			-4340 Oct 28 j 22:52	0°♄	
	-4344 Mar 09 j 08:47	0°♄			-4340 Dec 08 j 23:01	0°♄	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 7

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4339 Jan 18 j 04:02	0°♌				-4335 Nov 25 j 23:40	30°♑	
desc. node	-4339 Jan 27 j 20:10	7°♌14'44		direct		-4334 Jan 03 j 12:12	20°♑59'43	
	-4339 Feb 27 j 09:43	0°♊				-4334 Feb 15 j 04:10	0°♊	
	-4339 Apr 10 j 03:13	0°♊				-4334 Apr 17 j 20:52	0°♊	
	-4339 May 26 j 22:22	0°♊				-4334 Jun 05 j 23:42	0°♊	
retrograde	-4339 Aug 02 j 16:11	23°♊34'46				-4334 Jul 20 j 06:18	0°♊	
min. Earth dist.	-4339 Sep 02 j 20:15	16°♊57'09	0.53262 AU			-4334 Aug 30 j 10:52	0°♊	
greatest brilliancy	-4339 Sep 08 j 17:52	14°♊42'54	-1.9m		desc. node	-4334 Sep 19 j 12:30	15°♊12'42	
opposition	-4339 Sep 10 j 01:08	14°♊13'08	-3°-55'-30			-4334 Oct 08 j 15:57	0°♊	
direct	-4339 Oct 15 j 04:07	6°♊27'06			evening set	-4334 Oct 16 j 05:13	5°♊53'22	
asc. node	-4339 Dec 12 j 16:25	22°♊27'07				-4334 Nov 15 j 21:28	0°♌	
	-4339 Dec 28 j 14:10	0°♋						
	-4338 Feb 21 j 20:05	0°♋		conjunction		-4334 Dec 20 j 00:03	26°♌48'13	0°-56'-32
	-4338 Apr 13 j 08:49	0°♋		minimum elong		-4334 Dec 19 j 20:59	26°♌42'13	0°56'42
	-4338 May 31 j 10:10	0°♊				-4334 Dec 24 j 02:22	0°♊	
evening set	-4338 Jul 06 j 00:02	23°♊11'10				-4333 Feb 01 j 04:04	0°♊	
	-4338 Jul 16 j 04:38	0°♊			max. Earth dist.	-4333 Feb 03 j 16:01	1°♊52'52	2.40198 AU
max. Earth dist.	-4338 Jul 24 j 14:11	5°♊40'26	2.55526 AU		morning rise	-4333 Feb 24 j 23:18	17°♊43'17	
						-4333 Mar 13 j 20:48	0°♊	
conjunction	-4338 Aug 23 j 18:30	26°♊31'48	1°03'02			-4333 Apr 25 j 18:19	0°♋	
minimum elong	-4338 Aug 23 j 19:52	26°♊34'11	1°03'13			-4333 Jun 10 j 08:14	0°♋	
	-4338 Aug 28 j 16:37	0°♊				-4333 Jul 29 j 13:27	0°♋	
	-4338 Oct 09 j 03:34	0°♊		asc. node		-4333 Aug 04 j 18:38	3°♋34'01	
morning rise	-4338 Oct 13 j 22:09	3°♊32'15				-4333 Sep 25 j 09:11	0°♊	
	-4338 Nov 18 j 01:01	0°♊		retrograde		-4333 Nov 19 j 21:34	14°♊18'13	
desc. node	-4338 Dec 15 j 18:57	21°♊19'01		opposition		-4333 Dec 28 j 17:19	5°♊17'30	4°26'03
	-4338 Dec 27 j 00:32	0°♌		greatest brilliancy		-4333 Dec 29 j 09:26	5°♊01'43	-1.3m
	-4337 Feb 03 j 21:01	0°♊		min. Earth dist.		-4332 Jan 01 j 11:50	3°♊48'47	0.64818 AU
	-4337 Mar 15 j 13:26	0°♊				-4332 Jan 11 j 20:14	30°♋	
	-4337 Apr 26 j 07:22	0°♊		direct		-4332 Feb 07 j 22:40	25°♋16'22	
	-4337 Jun 11 j 08:09	0°♋				-4332 Mar 08 j 04:47	0°♊	
	-4337 Aug 11 j 09:02	0°♋				-4332 May 11 j 11:54	0°♊	
retrograde	-4337 Sep 11 j 03:31	5°♋30'59				-4332 Jun 27 j 16:27	0°♊	
	-4337 Oct 09 j 15:25	30°♋		desc. node		-4332 Aug 06 j 11:33	28°♊16'00	
min. Earth dist.	-4337 Oct 17 j 06:36	27°♋04'25	0.63050 AU			-4332 Aug 08 j 19:55	0°♊	
opposition	-4337 Oct 21 j 01:08	25°♋33'36	0°-23'-7			-4332 Sep 17 j 09:32	0°♊	
greatest brilliancy	-4337 Oct 20 j 23:21	25°♋35'24	-1.5m			-4332 Oct 25 j 19:28	0°♌	
asc. node	-4337 Oct 30 j 17:23	21°♋50'37				-4332 Dec 03 j 04:43	0°♊	
direct	-4337 Nov 28 j 11:18	16°♋28'40		evening set		-4332 Dec 22 j 20:23	15°♊07'34	
	-4336 Jan 21 j 12:23	0°♋				-4331 Jan 11 j 12:00	0°♊	
	-4336 Mar 21 j 03:06	0°♋				-4331 Feb 21 j 10:33	0°♊	
	-4336 May 10 j 17:32	0°♊						
	-4336 Jun 26 j 06:58	0°♊		conjunction		-4331 Feb 22 j 09:11	0°♊40'30	0°-59'-18
	-4336 Aug 08 j 19:34	0°♊		minimum elong		-4331 Feb 22 j 11:13	0°♊44'08	0°59'30
evening set	-4336 Aug 19 j 04:14	7°♊25'03		max. Earth dist.		-4331 Mar 31 j 15:24	26°♊43'57	2.53056 AU
max. Earth dist.	-4336 Sep 05 j 12:27	20°♊03'19	2.43511 AU			-4331 Apr 05 j 10:18	0°♋	
	-4336 Sep 18 j 21:54	0°♊		morning rise		-4331 Apr 20 j 07:46	10°♊03'19	
						-4331 May 20 j 13:38	0°♋	
conjunction	-4336 Oct 13 j 12:36	18°♊38'18	0°13'35	asc. node		-4331 Jun 21 j 16:32	20°♋33'02	
minimum elong	-4336 Oct 13 j 13:33	18°♊40'08	0°13'38			-4331 Jul 06 j 19:03	0°♋	
behind sun begin	-4336 Oct 12 j 23:38	18°♊13'30				-4331 Aug 25 j 12:06	0°♊	
behind sun end	-4336 Oct 14 j 03:28	19°♊06'46				-4331 Oct 19 j 17:56	0°♊	
	-4336 Oct 28 j 06:41	0°♊		retrograde		-4331 Dec 30 j 23:42	21°♊53'44	
desc. node	-4336 Nov 01 j 15:33	3°♊23'09		opposition		-4330 Feb 05 j 10:56	14°♊01'23	5°11'42
	-4336 Dec 05 j 17:01	0°♌		greatest brilliancy		-4330 Feb 07 j 04:52	13°♊22'32	-1.7m
morning rise	-4336 Dec 15 j 02:12	7°♌21'41		min. Earth dist.		-4330 Feb 12 j 18:40	11°♊18'58	0.56271 AU
	-4335 Jan 13 j 01:24	0°♊		direct		-4330 Mar 17 j 12:28	4°♊32'39	
	-4335 Feb 21 j 05:00	0°♊				-4330 May 29 j 18:34	0°♊	
	-4335 Apr 03 j 00:43	0°♊		desc. node		-4330 Jun 24 j 11:02	15°♊45'18	
	-4335 May 16 j 11:01	0°♋				-4330 Jul 15 j 14:08	0°♊	
	-4335 Jul 03 j 01:36	0°♋				-4330 Aug 25 j 21:09	0°♊	
	-4335 Aug 30 j 15:40	0°♋				-4330 Oct 04 j 06:23	0°♌	
asc. node	-4335 Sep 16 j 18:10	5°♋59'09				-4330 Nov 12 j 09:52	0°♊	
retrograde	-4335 Oct 15 j 02:41	10°♋28'42				-4330 Dec 22 j 10:03	0°♊	
opposition	-4335 Nov 24 j 00:34	0°♋47'13	2°26'08			-4329 Feb 02 j 00:17	0°♊	
greatest brilliancy	-4335 Nov 23 j 22:56	0°♋48'51	-1.3m	evening set		-4329 Feb 18 j 20:18	11°♊46'10	
min. Earth dist.	-4335 Nov 23 j 23:40	0°♋48'06	0.67093 AU			-4329 Mar 17 j 12:22	0°♋	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 8

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

conjunction	-4329 Apr 13 j 02:56	17° Κ 44'33	0°-15'-6	desc. node	-4324 Feb 14 j 13:36	12° Μ 13'28	
minimum elong	-4329 Apr 13 j 03:37	17° Κ 45'40	0°15'10		-4324 Mar 10 j 06:55	0° ϛ	
behind sun begin	-4329 Apr 12 j 21:50	17° Κ 36'09			-4324 Apr 23 j 12:50	0° ϛ	
behind sun end	-4329 Apr 13 j 09:23	17° Κ 55'12			-4324 Jun 22 j 21:46	0° ≈	
max. Earth dist.	-4329 May 01 j 03:00	29° Κ 32'09	2.62570 AU	retrograde	-4324 Jul 15 j 09:58	3° ≈ 24'13	
	-4329 May 01 j 20:06	0° Υ			-4324 Aug 06 j 05:30	30° Ρ ϛ	
asc. node	-4329 May 09 j 13:23	5° Υ 00'43		min. Earth dist.	-4324 Aug 13 j 09:21	27° ϛ 39'58	0.48318 AU
morning rise	-4329 Jun 01 j 15:10	19° Υ 51'27		greatest brilliancy	-4324 Aug 19 j 13:21	25° ϛ 27'44	-2.2m
	-4329 Jun 17 j 13:07	0° ϛ		opposition	-4324 Aug 21 j 10:37	24° ϛ 47'00	-5°-18'-50
	-4329 Aug 04 j 04:19	0° Π		direct	-4324 Sep 23 j 21:12	17° ϛ 46'32	
	-4329 Sep 21 j 17:45	0° ϛ			-4324 Nov 12 j 01:28	0° ≈	
	-4329 Nov 11 j 10:41	0° Ω		asc. node	-4324 Dec 29 j 07:08	23° ≈ 26'59	
	-4328 Jan 09 j 21:09	0° η			-4323 Jan 10 j 02:15	0° Κ	
retrograde	-4328 Feb 26 j 15:17	11° η 17'18			-4323 Mar 02 j 13:54	0° Υ	
opposition	-4328 Mar 30 j 05:57	5° η 16'30	2°41'14		-4323 Apr 20 j 20:49	0° ϛ	
greatest brilliancy	-4328 Mar 31 j 11:32	4° η 53'22	-2.5m		-4323 Jun 07 j 11:07	0° Π	
min. Earth dist.	-4328 Apr 07 j 01:48	2° η 50'46	0.43534 AU	evening set	-4323 Jun 20 j 07:09	8° Π 17'40	
	-4328 Apr 17 j 18:15	30° Ρ Ω		max. Earth dist.	-4323 Jul 12 j 18:57	23° Π 04'39	2.59332 AU
direct	-4328 May 04 j 13:00	28° Ω 04'52			-4323 Jul 23 j 03:36	0° ϛ	
desc. node	-4328 May 11 j 11:18	28° Ω 24'31					
	-4328 May 21 j 13:32	0° η		conjunction	-4323 Aug 06 j 20:13	9° ϛ 56'45	1°09'56
	-4328 Jul 24 j 07:18	0° Δ		minimum elong	-4323 Aug 06 j 20:45	9° ϛ 57'40	1°10'08
	-4328 Sep 06 j 17:29	0° Μ			-4323 Sep 04 j 18:51	0° Ω	
	-4328 Oct 18 j 15:06	0° ϛ		morning rise	-4323 Sep 24 j 08:46	13° Ω 55'09	
	-4328 Nov 29 j 14:08	0° ϛ			-4323 Oct 16 j 12:31	0° η	
	-4327 Jan 11 j 16:21	0° ≈			-4323 Nov 25 j 18:19	0° Δ	
	-4327 Feb 25 j 07:03	0° Κ		desc. node	-4322 Jan 01 j 12:09	28° Δ 00'14	
asc. node	-4327 Mar 26 j 10:26	19° Κ 05'19			-4322 Jan 04 j 02:41	0° Μ	
evening set	-4327 Apr 04 j 06:03	24° Κ 48'08			-4322 Feb 12 j 08:07	0° ϛ	
	-4327 Apr 12 j 07:15	0° Υ			-4322 Mar 24 j 11:40	0° ϛ	
					-4322 May 06 j 03:55	0° ≈	
conjunction	-4327 May 22 j 18:33	25° Υ 55'51	0°31'13		-4322 Jun 24 j 09:21	0° Κ	
minimum elong	-4327 May 22 j 17:30	25° Υ 54'10	0°31'16	retrograde	-4322 Aug 27 j 16:46	20° Κ 37'41	
max. Earth dist.	-4327 May 24 j 19:22	27° Υ 13'44	2.66853 AU	min. Earth dist.	-4322 Oct 01 j 00:53	12° Κ 48'40	0.59833 AU
	-4327 May 29 j 03:38	0° ϛ		opposition	-4322 Oct 06 j 05:28	10° Κ 45'04	-1°-41'-24
morning rise	-4327 Jul 07 j 17:54	25° ϛ 16'31		greatest brilliancy	-4322 Oct 05 j 19:05	10° Κ 55'22	-1.6m
	-4327 Jul 15 j 03:00	0° Π		direct	-4322 Nov 12 j 11:55	2° Κ 05'42	
	-4327 Aug 30 j 16:31	0° ϛ		asc. node	-4322 Nov 16 j 08:09	2° Κ 11'19	
	-4327 Oct 15 j 16:33	0° Ω			-4321 Feb 04 j 18:42	0° Υ	
	-4327 Nov 30 j 10:15	0° η			-4321 Mar 31 j 01:11	0° ϛ	
	-4326 Jan 15 j 17:54	0° Δ			-4321 May 19 j 08:37	0° Π	
	-4326 Mar 06 j 10:51	0° Μ			-4321 Jul 04 j 12:36	0° ϛ	
desc. node	-4326 Mar 29 j 13:04	11° Μ 46'06		evening set	-4321 Aug 01 j 10:43	19° ϛ 04'07	
retrograde	-4326 May 15 j 11:30	24° Μ 02'26			-4321 Aug 16 j 23:57	0° Ω	
min. Earth dist.	-4326 Jun 12 j 10:03	19° Μ 29'20	0.38092 AU	max. Earth dist.	-4321 Aug 16 j 14:43	29° ϛ 43'37	2.48446 AU
opposition	-4326 Jun 15 j 16:04	18° Μ 36'18	-5°-16'-52				
greatest brilliancy	-4326 Jun 14 j 20:02	18° Μ 49'57	-2.8m	conjunction	-4321 Sep 22 j 13:11	26° Ω 32'27	0°38'25
direct	-4326 Jul 15 j 11:38	13° Μ 34'54		minimum elong	-4321 Sep 22 j 15:06	26° Ω 36'00	0°38'31
	-4326 Sep 09 j 16:14	0° ϛ			-4321 Sep 27 j 04:50	0° η	
	-4326 Nov 01 j 14:56	0° ϛ			-4321 Nov 05 j 17:29	0° Δ	
	-4326 Dec 19 j 11:24	0° ≈		morning rise	-4321 Nov 19 j 01:05	10° Δ 18'00	
	-4325 Feb 04 j 17:42	0° Κ		desc. node	-4321 Nov 19 j 10:44	10° Δ 36'44	
asc. node	-4325 Feb 11 j 07:49	4° Κ 10'10			-4321 Dec 14 j 07:42	0° Μ	
	-4325 Mar 24 j 06:14	0° Υ			-4320 Jan 21 j 19:18	0° ϛ	
	-4325 May 10 j 19:49	0° ϛ			-4320 Mar 01 j 01:39	0° ϛ	
evening set	-4325 May 13 j 18:22	1° ϛ 51'43			-4320 Apr 11 j 01:59	0° ≈	
max. Earth dist.	-4325 Jun 17 j 14:43	24° ϛ 04'48	2.65724 AU		-4320 May 25 j 01:25	0° Κ	
	-4325 Jun 26 j 19:20	0° Π			-4320 Jul 13 j 16:52	0° Υ	
				retrograde	-4320 Oct 01 j 17:19	27° Υ 28'18	
conjunction	-4325 Jun 29 j 11:08	1° Π 43'01	1°03'06	asc. node	-4320 Oct 03 j 08:53	27° Υ 27'14	
minimum elong	-4325 Jun 29 j 10:03	1° Π 41'16	1°03'16	min. Earth dist.	-4320 Nov 09 j 05:48	18° Υ 13'42	0.66252 AU
	-4325 Aug 11 j 14:46	0° ϛ		opposition	-4320 Nov 10 j 18:09	17° Υ 37'06	1°26'12
morning rise	-4325 Aug 13 j 21:58	1° ϛ 31'55		greatest brilliancy	-4320 Nov 10 j 14:35	17° Υ 40'42	-1.3m
	-4325 Sep 24 j 22:56	0° Ω		direct	-4320 Dec 20 j 13:39	8° Υ 03'00	
	-4325 Nov 06 j 20:56	0° η			-4319 Mar 03 j 06:10	0° ϛ	
	-4325 Dec 18 j 15:23	0° Δ			-4319 Apr 27 j 02:48	0° Π	
	-4324 Jan 28 j 18:51	0° Μ			-4319 Jun 13 j 21:51	0° ϛ	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 9

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4319 Jul 27 j 19:14	0°♂		minimum elong	-4314 Mar 26 j 07:14	1°♂08'06	0°34'11
	-4319 Sep 06 j 22:05	0°♍		max. Earth dist.	-4314 Apr 20 j 06:40	17°♂50'32	2.59434 AU
evening set	-4319 Sep 21 j 13:23	11°♍03'35			-4314 May 08 j 19:18	0°♀	
desc. node	-4319 Oct 06 j 07:52	22°♍23'00		morning rise	-4314 May 17 j 02:46	5°♀23'54	
	-4319 Oct 16 j 03:53	0°♊		asc. node	-4314 May 26 j 06:34	11°♀18'34	
max. Earth dist.	-4319 Nov 14 j 21:32	23°♊16'47	2.37669 AU		-4314 Jun 24 j 14:22	0°♄	
					-4314 Aug 11 j 18:38	0°♂	
conjunction	-4319 Nov 22 j 03:23	28°♊58'51	0°-32'-38		-4314 Sep 30 j 21:21	0°♌	
minimum elong	-4319 Nov 22 j 00:43	28°♊53'37	0°32'43		-4314 Nov 25 j 14:02	0°♏	
	-4319 Nov 23 j 10:27	0°♎		retrograde	-4313 Feb 01 j 11:07	20°♏00'01	
	-4319 Dec 31 j 15:39	0°♏		opposition	-4313 Mar 07 j 17:29	13°♏09'58	4°19'36
morning rise	-4318 Jan 29 j 01:11	21°♏55'05		greatest brilliancy	-4313 Mar 09 j 14:50	12°♏31'06	-2.1m
	-4318 Feb 08 j 16:39	0°♑		min. Earth dist.	-4313 Mar 16 j 04:24	10°♏17'21	0.48632 AU
	-4318 Mar 21 j 08:37	0°♒		direct	-4313 Apr 14 j 11:04	4°♏47'35	
	-4318 May 03 j 07:48	0°♈		desc. node	-4313 May 29 j 04:22	16°♏19'03	
	-4318 Jun 18 j 08:28	0°♀			-4313 Jun 24 j 00:53	0°♍	
	-4318 Aug 08 j 08:21	0°♄			-4313 Aug 08 j 17:59	0°♊	
asc. node	-4318 Aug 21 j 08:54	6°♄51'55			-4313 Sep 18 j 23:35	0°♎	
	-4318 Oct 22 j 08:52	0°♂			-4313 Oct 29 j 07:15	0°♏	
retrograde	-4318 Nov 05 j 14:47	1°♂11'42			-4313 Dec 09 j 05:04	0°♑	
	-4318 Nov 19 j 04:36	30°♈♂			-4312 Jan 20 j 12:54	0°♒	
opposition	-4318 Dec 14 j 23:45	21°♈52'22	3°46'05		-4312 Mar 04 j 14:25	0°♈	
greatest brilliancy	-4318 Dec 15 j 07:09	21°♈45'02	-1.3m	evening set	-4312 Mar 18 j 15:03	9°♈18'51	
min. Earth dist.	-4318 Dec 17 j 06:21	20°♈58'12	0.66469 AU	asc. node	-4312 Apr 12 j 02:37	25°♈21'23	
direct	-4317 Jan 25 j 02:14	11°♈52'43			-4312 Apr 19 j 06:20	0°♀	
	-4317 Mar 29 j 14:06	0°♂					
	-4317 May 22 j 15:19	0°♌		conjunction	-4312 May 07 j 14:15	11°♀49'38	0°14'22
	-4317 Jul 07 j 05:35	0°♏		minimum elong	-4312 May 07 j 13:41	11°♀48'44	0°14'23
	-4317 Aug 17 j 20:58	0°♍		behind sun begin	-4312 May 07 j 05:25	11°♀35'26	
desc. node	-4317 Aug 24 j 04:46	4°♍43'54		behind sun end	-4312 May 07 j 21:58	12°♀02'01	
	-4317 Sep 26 j 05:44	0°♊		max. Earth dist.	-4312 May 15 j 14:51	16°♀58'38	2.65827 AU
greatest brilliancy	-4317 Nov 02 j 13:54	29°♊14'47	1.2m		-4312 Jun 04 j 23:43	0°♄	
	-4317 Nov 03 j 12:54	0°♎		morning rise	-4312 Jun 23 j 13:29	11°♄49'56	
evening set	-4317 Nov 27 j 04:11	18°♎34'29			-4312 Jul 22 j 02:56	0°♂	
	-4317 Dec 11 j 19:25	0°♏			-4312 Sep 07 j 05:51	0°♌	
	-4316 Jan 19 j 23:19	0°♑			-4312 Oct 24 j 10:41	0°♏	
					-4312 Dec 11 j 14:28	0°♍	
conjunction	-4316 Jan 30 j 17:39	8°♑03'07	-1°-7'-35		-4311 Feb 01 j 18:24	0°♊	
minimum elong	-4316 Jan 30 j 18:21	8°♑04'24	1°07'47	retrograde	-4311 Apr 14 j 00:01	23°♊16'31	
	-4316 Feb 29 j 18:11	0°♒		desc. node	-4311 Apr 15 j 04:43	23°♊15'58	
max. Earth dist.	-4316 Mar 15 j 14:33	10°♒34'05	2.48122 AU	opposition	-4311 May 14 j 13:13	18°♊12'52	-2°-11'-12
morning rise	-4316 Mar 31 j 19:54	21°♒53'41		greatest brilliancy	-4311 May 14 j 17:48	18°♊09'46	-2.9m
	-4316 Apr 12 j 15:13	0°♈		min. Earth dist.	-4311 May 16 j 18:02	17°♊37'14	0.38109 AU
	-4316 May 27 j 19:40	0°♀		direct	-4311 Jun 14 j 12:33	12°♊54'36	
asc. node	-4316 Jul 08 j 08:52	26°♀14'02			-4311 Aug 09 j 15:55	0°♎	
	-4316 Jul 14 j 12:24	0°♄			-4311 Sep 29 j 03:35	0°♏	
	-4316 Sep 03 j 22:37	0°♂			-4311 Nov 13 j 16:49	0°♑	
	-4316 Nov 07 j 12:59	0°♌			-4311 Dec 28 j 20:17	0°♒	
retrograde	-4316 Dec 13 j 09:50	6°♌37'40			-4310 Feb 12 j 17:36	0°♈	
	-4315 Jan 15 j 06:20	30°♈♂		asc. node	-4310 Feb 27 j 23:47	9°♈50'20	
opposition	-4315 Jan 19 j 23:27	28°♂14'15	5°06'44		-4310 Mar 31 j 12:14	0°♀	
greatest brilliancy	-4315 Jan 21 j 07:43	27°♂43'28	-1.5m	evening set	-4310 Apr 28 j 18:11	17°♀57'25	
min. Earth dist.	-4315 Jan 26 j 00:05	25°♂56'24	0.60318 AU		-4310 May 17 j 17:10	0°♄	
direct	-4315 Mar 01 j 18:54	18°♂24'33		max. Earth dist.	-4310 Jun 08 j 05:16	13°♄41'55	2.66826 AU
	-4315 Apr 17 j 20:28	0°♌					
	-4315 Jun 11 j 13:33	0°♏		conjunction	-4310 Jun 14 j 20:36	17°♄56'29	0°53'06
desc. node	-4315 Jul 11 j 03:40	19°♏46'58		minimum elong	-4310 Jun 14 j 19:19	17°♄54'26	0°53'14
	-4315 Jul 25 j 13:34	0°♍			-4310 Jul 03 j 15:22	0°♂	
	-4315 Sep 03 j 21:16	0°♊		morning rise	-4310 Jul 30 j 03:33	17°♂11'15	
	-4315 Oct 12 j 17:47	0°♎			-4310 Aug 18 j 16:05	0°♌	
	-4315 Nov 20 j 11:37	0°♏			-4310 Oct 02 j 12:15	0°♏	
	-4315 Dec 30 j 03:04	0°♑			-4310 Nov 15 j 05:20	0°♍	
evening set	-4314 Jan 29 j 02:24	21°♑55'39			-4310 Dec 28 j 02:21	0°♊	
	-4314 Feb 09 j 09:23	0°♒			-4309 Feb 08 j 18:48	0°♎	
	-4314 Mar 24 j 15:01	0°♈		desc. node	-4309 Mar 03 j 06:31	15°♎32'29	
					-4309 Mar 24 j 22:04	0°♏	
conjunction	-4314 Mar 26 j 05:39	1°♈05'26	0°-34'-4		-4309 May 16 j 21:13	0°♑	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 10

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

retrograde	-4309 Jun 25 j 09:17	9° $\overline{\text{C}}$ 40'21			-4304 Jun 21 j 11:18	0° $\overline{\text{C}}$	
min. Earth dist.	-4309 Jul 22 j 13:49	4° $\overline{\text{C}}$ 46'07	0.43393 AU		-4304 Aug 04 j 03:09	0° Ω	
greatest brilliancy	-4309 Jul 28 j 07:18	2° $\overline{\text{C}}$ 53'59	-2.5m	evening set	-4304 Aug 30 j 14:43	19° Ω 08'31	
opposition	-4309 Jul 30 j 10:32	2° $\overline{\text{C}}$ 11'52	-6°-19'-12		-4304 Sep 14 j 05:57	0° $\overline{\text{M}}$	
	-4309 Aug 06 j 10:42	30° $\overline{\text{R}}$ 7		max. Earth dist.	-4304 Sep 21 j 09:32	5° $\overline{\text{M}}$ 22'20	2.40906 AU
direct	-4309 Aug 31 j 01:04	26° $\overline{\text{J}}$ 04'15		desc. node	-4304 Oct 23 j 01:09	29° $\overline{\text{M}}$ 35'48	
	-4309 Sep 25 j 19:50	0° $\overline{\text{C}}$			-4304 Oct 23 j 13:38	0° $\underline{\text{C}}$	
	-4309 Nov 30 j 16:36	0° \approx					
asc. node	-4308 Jan 15 j 22:10	26° \approx 48'13		conjunction	-4304 Oct 27 j 02:24	2° $\underline{\text{C}}$ 44'29	0°-2'-57
	-4308 Jan 21 j 06:21	0° $\overline{\text{K}}$		minimum elong	-4304 Oct 27 j 02:09	2° $\underline{\text{C}}$ 43'59	0°02'57
	-4308 Mar 10 j 15:50	0° $\overline{\text{Y}}$		behind sun begin	-4304 Oct 26 j 00:29	1° $\underline{\text{C}}$ 54'11	
	-4308 Apr 28 j 02:18	0° $\overline{\text{B}}$		behind sun end	-4304 Oct 28 j 03:48	3° $\underline{\text{C}}$ 33'49	
evening set	-4308 Jun 05 j 04:18	24° $\overline{\text{B}}$ 05'23			-4304 Nov 30 j 22:21	0° $\overline{\text{M}}$	
	-4308 Jun 14 j 09:06	0° $\overline{\text{II}}$		morning rise	-4304 Dec 31 j 06:27	23° $\overline{\text{M}}$ 48'07	
max. Earth dist.	-4308 Jul 02 j 05:18	11° $\overline{\text{II}}$ 34'35	2.62453 AU		-4303 Jan 08 j 05:11	0° $\overline{\text{J}}$	
					-4303 Feb 16 j 07:04	0° $\overline{\text{C}}$	
conjunction	-4308 Jul 22 j 00:21	24° $\overline{\text{II}}$ 37'26	1°11'01		-4303 Mar 29 j 00:12	0° \approx	
minimum elong	-4308 Jul 22 j 00:06	24° $\overline{\text{II}}$ 37'01	1°11'13		-4303 May 11 j 04:24	0° $\overline{\text{K}}$	
	-4308 Jul 30 j 01:44	0° $\overline{\text{C}}$			-4303 Jun 26 j 23:53	0° $\overline{\text{Y}}$	
morning rise	-4308 Sep 06 j 18:30	26° $\overline{\text{C}}$ 24'13			-4303 Aug 20 j 09:48	0° $\overline{\text{B}}$	
	-4308 Sep 11 j 22:23	0° Ω		asc. node	-4303 Sep 07 j 00:29	7° $\overline{\text{B}}$ 46'05	
	-4308 Oct 24 j 01:17	0° $\overline{\text{M}}$		retrograde	-4303 Oct 22 j 21:46	18° $\overline{\text{B}}$ 19'01	
	-4308 Dec 03 j 18:25	0° $\underline{\text{C}}$		opposition	-4303 Dec 01 j 15:36	8° $\overline{\text{B}}$ 44'35	2°57'47
	-4307 Jan 12 j 14:56	0° $\overline{\text{M}}$		greatest brilliancy	-4303 Dec 01 j 16:25	8° $\overline{\text{B}}$ 43'46	-1.3m
desc. node	-4307 Jan 18 j 07:01	4° $\overline{\text{M}}$ 17'20		min. Earth dist.	-4303 Dec 02 j 10:17	8° $\overline{\text{B}}$ 25'54	0.67138 AU
	-4307 Feb 21 j 09:40	0° $\overline{\text{J}}$			-4303 Dec 29 j 03:40	30° $\overline{\text{R}}$ Y	
	-4307 Apr 03 j 08:05	0° $\overline{\text{C}}$		direct	-4302 Jan 11 j 09:24	28° $\overline{\text{Y}}$ 51'40	
	-4307 May 17 j 21:02	0° \approx			-4302 Jan 25 j 08:36	0° $\overline{\text{B}}$	
	-4307 Jul 17 j 05:58	0° $\overline{\text{K}}$			-4302 Apr 11 j 03:05	0° $\overline{\text{II}}$	
retrograde	-4307 Aug 12 j 05:37	4° $\overline{\text{K}}$ 16'29			-4302 May 31 j 13:46	0° $\overline{\text{C}}$	
	-4307 Sep 05 j 17:59	30° $\overline{\text{R}}$ \approx			-4302 Jul 15 j 06:33	0° Ω	
min. Earth dist.	-4307 Sep 13 j 13:51	27° \approx 11'24	0.55782 AU		-4302 Aug 25 j 15:07	0° $\overline{\text{M}}$	
greatest brilliancy	-4307 Sep 19 j 03:40	25° \approx 01'43	-1.8m	desc. node	-4302 Sep 09 j 22:43	11° $\overline{\text{M}}$ 33'35	
opposition	-4307 Sep 20 j 02:40	24° \approx 39'21	-3°-5'-36		-4302 Oct 03 j 21:32	0° $\underline{\text{C}}$	
direct	-4307 Oct 26 j 01:03	16° \approx 32'05		evening set	-4302 Oct 31 j 00:27	21° $\underline{\text{C}}$ 14'22	
asc. node	-4307 Dec 02 j 21:50	24° \approx 03'44			-4302 Nov 11 j 03:19	0° $\overline{\text{M}}$	
	-4307 Dec 18 j 03:23	0° $\overline{\text{K}}$			-4302 Dec 19 j 08:11	0° $\overline{\text{J}}$	
	-4306 Feb 15 j 14:43	0° $\overline{\text{Y}}$					
	-4306 Apr 08 j 04:51	0° $\overline{\text{B}}$		conjunction	-4301 Jan 04 j 13:04	12° $\overline{\text{J}}$ 33'43	-1°-4'-29
	-4306 May 26 j 15:54	0° $\overline{\text{II}}$		minimum elong	-4301 Jan 04 j 11:07	12° $\overline{\text{J}}$ 29'59	1°04'41
	-4306 Jul 11 j 13:54	0° $\overline{\text{C}}$			-4301 Jan 27 j 09:42	0° $\overline{\text{C}}$	
evening set	-4306 Jul 15 j 07:40	2° $\overline{\text{C}}$ 31'03		max. Earth dist.	-4301 Feb 22 j 17:50	19° $\overline{\text{C}}$ 35'16	2.42912 AU
max. Earth dist.	-4306 Aug 01 j 06:37	14° $\overline{\text{C}}$ 04'30	2.53143 AU		-4301 Mar 09 j 01:58	0° \approx	
	-4306 Aug 24 j 01:52	0° Ω		morning rise	-4301 Mar 10 j 18:58	1° \approx 13'39	
					-4301 Apr 20 j 21:57	0° $\overline{\text{K}}$	
conjunction	-4306 Sep 03 j 01:06	7° Ω 05'53	0°56'06		-4301 Jun 05 j 06:24	0° $\overline{\text{Y}}$	
minimum elong	-4306 Sep 03 j 02:50	7° Ω 08'59	0°56'15		-4301 Jul 23 j 17:51	0° $\overline{\text{B}}$	
	-4306 Oct 04 j 11:00	0° $\overline{\text{M}}$		asc. node	-4301 Jul 26 j 00:07	1° $\overline{\text{B}}$ 20'18	
morning rise	-4306 Oct 26 j 02:54	16° $\overline{\text{M}}$ 13'20			-4301 Sep 16 j 05:20	0° $\overline{\text{II}}$	
	-4306 Nov 13 j 05:23	0° $\underline{\text{C}}$		retrograde	-4301 Nov 28 j 12:38	22° $\overline{\text{II}}$ 30'54	
desc. node	-4306 Dec 06 j 04:24	17° $\underline{\text{C}}$ 41'06		opposition	-4300 Jan 05 j 22:39	13° $\overline{\text{II}}$ 42'19	4°44'33
	-4306 Dec 22 j 01:27	0° $\overline{\text{M}}$		greatest brilliancy	-4300 Jan 06 j 20:23	13° $\overline{\text{II}}$ 21'11	-1.4m
	-4305 Jan 29 j 18:20	0° $\overline{\text{J}}$		min. Earth dist.	-4300 Jan 10 j 12:40	11° $\overline{\text{II}}$ 55'19	0.63464 AU
	-4305 Mar 10 j 05:54	0° $\overline{\text{C}}$		direct	-4300 Feb 16 j 02:08	3° $\overline{\text{II}}$ 43'07	
	-4305 Apr 20 j 14:51	0° \approx			-4300 May 03 j 21:40	0° $\overline{\text{C}}$	
	-4305 Jun 04 j 14:12	0° $\overline{\text{K}}$			-4300 Jun 21 j 19:15	0° Ω	
	-4305 Jul 28 j 17:02	0° $\overline{\text{Y}}$		desc. node	-4300 Jul 27 j 20:42	25° Ω 10'14	
retrograde	-4305 Sep 19 j 03:44	13° $\overline{\text{Y}}$ 59'57			-4300 Aug 03 j 11:42	0° $\overline{\text{M}}$	
asc. node	-4305 Oct 20 j 23:10	7° $\overline{\text{Y}}$ 17'47			-4300 Sep 12 j 06:57	0° $\underline{\text{C}}$	
min. Earth dist.	-4305 Oct 26 j 03:58	5° $\overline{\text{Y}}$ 15'08	0.64435 AU		-4300 Oct 20 j 20:06	0° $\overline{\text{M}}$	
opposition	-4305 Oct 29 j 03:24	4° $\overline{\text{Y}}$ 03'15	0°19'11		-4300 Nov 28 j 07:47	0° $\overline{\text{J}}$	
greatest brilliancy	-4305 Oct 29 j 01:57	4° $\overline{\text{Y}}$ 04'42	-1.4m	evening set	-4299 Jan 05 j 23:41	29° $\overline{\text{J}}$ 27'37	
	-4305 Nov 08 j 17:03	30° $\overline{\text{R}}$ Y			-4299 Jan 06 j 16:59	0° $\overline{\text{C}}$	
direct	-4305 Dec 07 j 02:12	24° $\overline{\text{K}}$ 46'45			-4299 Feb 16 j 17:05	0° \approx	
	-4304 Jan 07 j 13:12	0° $\overline{\text{Y}}$					
	-4304 Mar 14 j 16:49	0° $\overline{\text{B}}$		conjunction	-4299 Mar 06 j 13:00	12° \approx 36'42	0°-51'-16
	-4304 May 05 j 12:01	0° $\overline{\text{II}}$		minimum elong	-4299 Mar 06 j 15:08	12° \approx 40'25	0°51'26

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 11

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4299 Mar 31 j 17:41	0° H				-4294 Apr 16 j 21:24	0° J	
max. Earth dist.	-4299 Apr 08 j 07:49	5° H 08'42	2.55512 AU	retrograde		-4294 May 31 j 10:54	11° J 36'41	
morning rise	-4299 Apr 30 j 11:27	19° H 55'58		min. Earth dist.		-4294 Jun 27 j 08:44	7° J 08'55	0.39389 AU
	-4299 May 15 j 19:57	0° Y		greatest brilliancy		-4294 Jul 01 j 09:27	5° J 59'04	-2.7m
asc. node	-4299 Jun 11 j 22:27	17° Y 26'35		opposition		-4294 Jul 02 j 22:06	5° J 32'21	-6°-12'-28
	-4299 Jul 01 j 19:56	0° B		direct		-4294 Aug 02 j 03:23	0° J 14'45	
	-4299 Aug 19 j 20:07	0° II				-4294 Oct 23 j 06:38	0° Z	
	-4299 Oct 11 j 13:05	0° S				-4294 Dec 12 j 21:18	0° \approx	
	-4299 Dec 24 j 10:44	0° Q				-4293 Jan 30 j 05:58	0° H	
retrograde	-4298 Jan 10 j 23:18	1° Q 44'36		asc. node		-4293 Feb 01 j 13:11	1° H 26'07	
	-4298 Jan 27 j 11:28	30° R S				-4293 Mar 19 j 07:22	0° Y	
opposition	-4298 Feb 15 j 16:44	24° S 12'18	5°03'01			-4293 May 06 j 03:18	0° B	
greatest brilliancy	-4298 Feb 17 j 14:17	23° S 30'58	-1.9m	evening set		-4293 May 22 j 07:26	10° B 13'45	
min. Earth dist.	-4298 Feb 23 j 14:09	21° S 21'09	0.53679 AU			-4293 Jun 22 j 05:20	0° II	
direct	-4298 Mar 27 j 02:19	15° S 01'39		max. Earth dist.		-4293 Jun 23 j 04:52	0° II 37'58	2.64787 AU
	-4298 May 18 j 23:33	0° Q						
desc. node	-4298 Jun 14 j 20:26	14° Q 50'56		conjunction		-4293 Jul 07 j 22:28	10° II 11'21	1°07'14
	-4298 Jul 08 j 11:56	0° M		minimum elong		-4293 Jul 07 j 21:37	10° II 10'00	1°07'24
	-4298 Aug 19 j 18:50	0° L				-4293 Aug 06 j 23:46	0° S	
	-4298 Sep 28 j 15:19	0° M		morning rise		-4293 Aug 22 j 16:09	10° S 31'35	
	-4298 Nov 07 j 02:23	0° J				-4293 Sep 20 j 03:42	0° Q	
	-4298 Dec 17 j 08:25	0° Z				-4293 Nov 01 j 18:16	0° M	
	-4297 Jan 28 j 03:23	0° \approx				-4293 Dec 13 j 02:26	0° L	
evening set	-4297 Mar 01 j 18:28	22° \approx 32'35				-4292 Jan 22 j 16:26	0° M	
	-4297 Mar 12 j 19:04	0° H		desc. node		-4292 Feb 04 j 23:31	9° M 51'05	
						-4292 Mar 03 j 09:09	0° J	
conjunction	-4297 Apr 22 j 16:40	27° H 04'14	0°-4'-6			-4292 Apr 14 j 21:08	0° Z	
minimum elong	-4297 Apr 22 j 16:52	27° H 04'32	0°04'07			-4292 Jun 03 j 10:26	0° \approx	
behind sun begin	-4297 Apr 21 j 20:40	26° H 31'38		retrograde		-4292 Jul 26 j 03:03	15° \approx 39'24	
behind sun end	-4297 Apr 23 j 13:03	27° H 37'26		min. Earth dist.		-4292 Aug 25 j 07:21	9° \approx 24'46	0.51089 AU
	-4297 Apr 27 j 04:40	0° Y		greatest brilliancy		-4292 Aug 31 j 08:59	7° \approx 09'45	-2.0m
asc. node	-4297 Apr 29 j 19:04	1° Y 41'20		opposition		-4292 Sep 01 j 22:35	6° \approx 34'39	-4°-32'-28
max. Earth dist.	-4297 May 06 j 22:55	6° Y 19'44	2.63970 AU			-4292 Sep 24 j 23:19	30° R Z	
morning rise	-4297 Jun 10 j 03:16	28° Y 15'34		direct		-4292 Oct 06 j 08:08	29° Z 07'42	
	-4297 Jun 12 j 20:50	0° B				-4292 Oct 18 j 02:51	0° \approx	
	-4297 Jul 30 j 06:39	0° II		asc. node		-4292 Dec 19 j 13:21	22° \approx 47'26	
	-4297 Sep 16 j 05:03	0° S				-4291 Jan 02 j 13:24	0° H	
	-4297 Nov 04 j 07:06	0° Q				-4291 Feb 24 j 22:21	0° Y	
	-4297 Dec 27 j 08:28	0° M				-4291 Apr 15 j 21:30	0° B	
retrograde	-4296 Mar 13 j 18:38	25° M 24'53				-4291 Jun 02 j 18:41	0° II	
opposition	-4296 Apr 14 j 08:03	19° M 51'08	1°13'13	evening set		-4291 Jun 29 j 04:52	17° II 08'31	
greatest brilliancy	-4296 Apr 14 j 20:46	19° M 41'47	-2.6m			-4291 Jul 18 j 13:22	0° S	
min. Earth dist.	-4296 Apr 20 j 22:38	17° M 55'01	0.41052 AU	max. Earth dist.		-4291 Jul 19 j 12:21	0° S 38'36	2.57325 AU
desc. node	-4296 May 01 j 22:29	15° M 07'41						
direct	-4296 May 18 j 01:57	13° M 24'03		conjunction		-4291 Aug 16 j 08:11	19° S 38'16	1°06'43
	-4296 Jul 11 j 10:47	0° L		minimum elong		-4291 Aug 16 j 09:11	19° S 40'01	1°06'55
	-4296 Aug 29 j 11:36	0° M				-4291 Aug 31 j 03:53	0° Q	
	-4296 Oct 11 j 22:45	0° J		morning rise		-4291 Oct 05 j 04:15	25° Q 09'14	
	-4296 Nov 23 j 18:18	0° Z				-4291 Oct 11 j 18:46	0° M	
	-4295 Jan 06 j 09:24	0° \approx				-4291 Nov 20 j 20:26	0° L	
	-4295 Feb 20 j 08:41	0° H		desc. node		-4291 Dec 22 j 22:40	24° L 34'14	
asc. node	-4295 Mar 16 j 14:53	15° H 49'38				-4291 Dec 29 j 23:48	0° M	
	-4295 Apr 07 j 14:10	0° Y				-4290 Feb 06 j 23:42	0° J	
evening set	-4295 Apr 13 j 09:24	3° Y 43'22				-4290 Mar 18 j 19:28	0° Z	
	-4295 May 24 j 12:55	0° B				-4290 Apr 29 j 19:44	0° \approx	
max. Earth dist.	-4295 May 30 j 03:35	3° B 34'34	2.67084 AU			-4290 Jun 15 j 18:09	0° H	
				retrograde		-4290 Sep 05 j 02:37	29° H 43'53	
conjunction	-4295 May 31 j 06:45	4° B 17'52	0°40'02	min. Earth dist.		-4290 Oct 10 j 10:55	21° H 33'15	0.61717 AU
minimum elong	-4295 May 31 j 05:32	4° B 15'56	0°40'07	opposition		-4290 Oct 14 j 20:44	19° H 47'24	0°-55'-11
	-4295 Jul 10 j 11:31	0° II		greatest brilliancy		-4290 Oct 14 j 15:50	19° H 52'18	-1.5m
morning rise	-4295 Jul 15 j 20:53	3° II 27'54		asc. node		-4290 Nov 06 j 14:10	12° H 25'18	
	-4295 Aug 25 j 19:46	0° S		direct		-4290 Nov 21 j 18:37	10° H 53'13	
	-4295 Oct 10 j 08:25	0° Q				-4289 Jan 27 j 07:49	0° Y	
	-4295 Nov 24 j 05:14	0° M				-4289 Mar 25 j 06:58	0° B	
	-4294 Jan 07 j 22:04	0° L				-4289 May 14 j 08:23	0° II	
	-4294 Feb 22 j 18:41	0° M				-4289 Jun 29 j 18:53	0° S	
desc. node	-4294 Mar 19 j 23:34	15° M 20'10		evening set		-4289 Aug 11 j 21:32	29° S 41'11	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 12

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4289 Aug 12 j 08:09	0°♂				-4284 Apr 07 j 21:21	0°♂	
max. Earth dist.	-4289 Aug 27 j 15:22	10°♂57'57	2.45723 AU	morning rise		-4284 Apr 12 j 05:42	2°♂57'30	
	-4289 Sep 22 j 12:43	0°♂				-4284 May 22 j 23:35	0°♂	
				asc. node		-4284 Jun 28 j 14:06	23°♂19'18	
conjunction	-4289 Oct 04 j 16:08	9°♂07'00	0°25'03			-4284 Jul 09 j 08:04	0°♂	
minimum elong	-4289 Oct 04 j 17:40	9°♂09'54	0°25'07			-4284 Aug 28 j 14:49	0°♂	
	-4289 Oct 31 j 23:55	0°♂				-4284 Oct 25 j 09:48	0°♂	
desc. node	-4289 Nov 09 j 19:33	6°♂49'40		retrograde		-4284 Dec 23 j 05:05	15°♂36'33	
morning rise	-4289 Dec 03 j 22:36	25°♂38'37		opposition		-4283 Jan 29 j 04:16	7°♂29'25	5°11'40
	-4289 Dec 09 j 12:08	0°♂		greatest brilliancy		-4283 Jan 30 j 18:04	6°♂53'50	-1.6m
greatest brilliancy	-4289 Dec 18 j 16:38	7°♂11'41	1.2m	min. Earth dist.		-4283 Feb 04 j 22:13	4°♂57'18	0.58195 AU
	-4288 Jan 16 j 21:41	0°♂				-4283 Feb 20 j 15:35	30°♂♂	
	-4288 Feb 25 j 01:36	0°♂		direct		-4283 Mar 10 j 14:35	27°♂49'38	
	-4288 Apr 05 j 21:39	0°♂				-4283 Mar 29 j 09:57	0°♂	
	-4288 May 19 j 10:59	0°♂				-4283 Jun 04 j 02:31	0°♂	
	-4288 Jul 06 j 15:35	0°♂				-4283 Jul 01 j 14:31	17°♂36'58	
	-4288 Sep 08 j 04:14	0°♂		desc. node		-4283 Jul 19 j 12:39	0°♂	
asc. node	-4288 Sep 23 j 15:07	3°♂54'40				-4283 Aug 29 j 09:03	0°♂	
retrograde	-4288 Oct 09 j 10:53	5°♂24'45				-4283 Oct 07 j 12:03	0°♂	
	-4288 Nov 07 j 03:19	30°♂♂				-4283 Nov 15 j 10:23	0°♂	
opposition	-4288 Nov 18 j 10:09	25°♂38'25	2°02'00			-4283 Dec 25 j 05:25	0°♂	
greatest brilliancy	-4288 Nov 18 j 07:10	25°♂41'25	-1.3m			-4282 Feb 04 j 14:32	0°♂	
min. Earth dist.	-4288 Nov 17 j 17:15	25°♂55'24	0.66833 AU	evening set		-4282 Feb 10 j 03:59	3°♂55'43	
direct	-4288 Dec 28 j 14:41	15°♂56'29				-4282 Mar 19 j 22:21	0°♂	
	-4287 Feb 22 j 00:12	0°♂						
	-4287 Apr 21 j 05:29	0°♂		conjunction		-4282 Apr 05 j 15:39	11°♂14'02	0°-23'-10
	-4287 Jun 08 j 19:13	0°♂		minimum elong		-4282 Apr 05 j 16:44	11°♂15'50	0°23'15
	-4287 Jul 22 j 22:57	0°♂		max. Earth dist.		-4282 Apr 26 j 16:02	25°♂07'16	2.61265 AU
	-4287 Sep 02 j 03:50	0°♂				-4282 May 04 j 03:13	0°♂	
desc. node	-4287 Sep 26 j 16:14	18°♂36'35		asc. node		-4282 May 16 j 10:52	7°♂59'35	
evening set	-4287 Oct 05 j 04:47	25°♂10'54		morning rise		-4282 May 26 j 03:15	14°♂14'00	
	-4287 Oct 11 j 09:51	0°♂				-4282 Jun 19 j 20:11	0°♂	
	-4287 Nov 18 j 15:54	0°♂				-4282 Aug 06 j 16:02	0°♂	
						-4282 Sep 24 j 19:00	0°♂	
conjunction	-4287 Dec 07 j 19:06	15°♂03'56	0°-47'-29			-4282 Nov 16 j 02:51	0°♂	
minimum elong	-4287 Dec 07 j 15:49	14°♂57'28	0°47'37			-4281 Jan 27 j 08:13	0°♂	
	-4287 Dec 26 j 20:39	0°♂		retrograde		-4281 Feb 15 j 03:27	2°♂02'30	
max. Earth dist.	-4286 Jan 10 j 01:40	11°♂01'51	2.38393 AU			-4281 Mar 05 j 07:01	30°♂♂	
	-4286 Feb 03 j 21:17	0°♂		opposition		-4281 Mar 20 j 12:52	25°♂39'09	3°31'25
morning rise	-4286 Feb 13 j 14:46	7°♂18'47		greatest brilliancy		-4281 Mar 22 j 03:36	25°♂07'30	-2.3m
	-4286 Mar 16 j 12:22	0°♂		min. Earth dist.		-4281 Mar 28 j 21:09	22°♂56'52	0.45765 AU
	-4286 Apr 28 j 09:01	0°♂		direct		-4281 Apr 26 j 00:20	17°♂53'35	
	-4286 Jun 13 j 01:06	0°♂		desc. node		-4281 May 19 j 14:18	21°♂28'22	
	-4286 Aug 01 j 19:15	0°♂				-4281 Jun 10 j 15:46	0°♂	
asc. node	-4286 Aug 11 j 15:51	5°♂30'04				-4281 Jul 31 j 15:38	0°♂	
	-4286 Oct 02 j 02:35	0°♂				-4281 Sep 12 j 08:13	0°♂	
retrograde	-4286 Nov 13 j 17:47	9°♂05'57				-4281 Oct 23 j 09:49	0°♂	
opposition	-4286 Dec 22 j 19:27	29°♂56'26	4°10'12			-4281 Dec 03 j 19:35	0°♂	
	-4286 Dec 22 j 15:51	30°♂♂				-4280 Jan 15 j 11:41	0°♂	
greatest brilliancy	-4286 Dec 23 j 07:29	29°♂44'34	-1.3m			-4280 Feb 28 j 19:05	0°♂	
min. Earth dist.	-4286 Dec 25 j 21:44	28°♂43'08	0.65686 AU	evening set		-4280 Mar 28 j 06:23	18°♂44'38	
direct	-4285 Feb 01 j 23:43	19°♂55'13		asc. node		-4280 Apr 02 j 07:56	22°♂02'36	
	-4285 Mar 18 j 18:57	0°♂				-4280 Apr 14 j 14:24	0°♂	
	-4285 May 16 j 08:47	0°♂						
	-4285 Jul 01 j 20:48	0°♂		conjunction		-4280 May 16 j 09:11	20°♂25'35	0°24'23
	-4285 Aug 12 j 19:48	0°♂		minimum elong		-4280 May 16 j 08:18	20°♂24'10	0°24'27
desc. node	-4285 Aug 14 j 15:10	1°♂20'26		max. Earth dist.		-4280 May 21 j 02:45	23°♂27'05	2.66496 AU
	-4285 Sep 21 j 07:45	0°♂				-4280 May 31 j 08:51	0°♂	
	-4285 Oct 29 j 16:17	0°♂		morning rise		-4280 Jul 01 j 17:38	20°♂00'02	
	-4285 Dec 06 j 23:46	0°♂				-4280 Jul 17 j 09:44	0°♂	
evening set	-4285 Dec 12 j 10:46	4°♂13'58				-4280 Sep 02 j 04:50	0°♂	
	-4284 Jan 15 j 04:34	0°♂				-4280 Oct 18 j 16:38	0°♂	
						-4280 Dec 04 j 08:06	0°♂	
conjunction	-4284 Feb 13 j 12:13	21°♂41'28	-1°-3'-54			-4279 Jan 21 j 12:00	0°♂	
minimum elong	-4284 Feb 13 j 13:53	21°♂44'31	1°04'06			-4279 Mar 18 j 14:19	0°♂	
	-4284 Feb 25 j 00:08	0°♂		desc. node		-4279 Apr 05 j 15:49	6°♂39'10	
max. Earth dist.	-4284 Mar 25 j 07:50	20°♂40'39	2.50919 AU	retrograde		-4279 May 02 j 00:28	10°♂50'02	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 13

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

opposition	-4279 Jun 01 j 15:00	5°♌42'20	-4°-6'-35			-4274 Aug 19 j 11:17	0°♌	
greatest brilliancy	-4279 Jun 01 j 09:01	5°♌46'18	-2.9m					
min. Earth dist.	-4279 May 31 j 18:11	5°♌56'10	0.37696 AU	conjunction		-4274 Sep 13 j 20:34	18°♌15'46	0°46'52
direct	-4279 Jul 01 j 14:23	0°♌41'41		minimum elong		-4274 Sep 13 j 22:30	18°♌19'17	0°47'00
	-4279 Sep 18 j 22:37	0°♌				-4274 Sep 29 j 18:55	0°♌	
	-4279 Nov 06 j 13:00	0°♌		morning rise		-4274 Nov 08 j 06:10	29°♌51'22	
	-4279 Dec 22 j 23:14	0°♌				-4274 Nov 08 j 10:40	0°♌	
	-4278 Feb 07 j 12:49	0°♌		desc. node		-4274 Nov 26 j 14:01	14°♌00'28	
asc. node	-4278 Feb 18 j 05:18	6°♌49'55				-4274 Dec 17 j 03:26	0°♌	
	-4278 Mar 26 j 16:17	0°♌				-4273 Jan 24 j 16:52	0°♌	
evening set	-4278 May 07 j 09:46	26°♌24'34				-4273 Mar 05 j 00:33	0°♌	
	-4278 May 13 j 01:41	0°♌				-4273 Apr 15 j 02:39	0°♌	
max. Earth dist.	-4278 Jun 13 j 15:41	20°♌07'04	2.66316 AU			-4273 May 29 j 08:43	0°♌	
						-4273 Jul 19 j 05:56	0°♌	
conjunction	-4278 Jun 23 j 05:51	26°♌16'13	0°59'19	retrograde		-4273 Sep 27 j 00:30	22°♌14'50	
minimum elong	-4278 Jun 23 j 04:40	26°♌14'18	0°59'28	asc. node		-4273 Oct 11 j 05:34	20°♌51'49	
	-4278 Jun 29 j 00:53	0°♌		min. Earth dist.		-4273 Nov 03 j 20:51	13°♌13'05	0.65566 AU
morning rise	-4278 Aug 07 j 13:22	25°♌45'57		opposition		-4273 Nov 06 j 01:03	12°♌20'28	0°59'06
	-4278 Aug 13 j 23:03	0°♌		greatest brilliancy		-4273 Nov 05 j 21:45	12°♌23'48	-1.4m
	-4278 Sep 27 j 13:05	0°♌		direct		-4273 Dec 15 j 11:39	2°♌53'44	
	-4278 Nov 09 j 19:33	0°♌				-4272 Mar 07 j 14:47	0°♌	
	-4278 Dec 22 j 01:13	0°♌				-4272 Apr 30 j 01:53	0°♌	
	-4277 Feb 01 j 18:39	0°♌				-4272 Jun 16 j 13:25	0°♌	
desc. node	-4277 Feb 21 j 16:52	14°♌14'39				-4272 Jul 30 j 09:49	0°♌	
	-4277 Mar 16 j 03:46	0°♌				-4272 Sep 09 j 13:44	0°♌	
	-4277 May 01 j 12:23	0°♌		evening set		-4272 Sep 11 j 16:57	1°♌35'54	
retrograde	-4277 Jul 07 j 17:51	24°♌00'12		desc. node		-4272 Oct 13 j 11:23	25°♌48'50	
min. Earth dist.	-4277 Aug 04 j 18:55	18°♌39'44	0.46062 AU	max. Earth dist.		-4272 Oct 14 j 17:44	26°♌47'30	2.38713 AU
greatest brilliancy	-4277 Aug 10 j 21:18	16°♌33'49	-2.3m			-4272 Oct 18 j 21:08	0°♌	
opposition	-4277 Aug 12 j 22:41	15°♌50'58	-5°-49'-52					
direct	-4277 Sep 14 j 14:17	9°♌13'30		conjunction		-4272 Nov 10 j 11:30	17°♌38'42	0°-19'-58
	-4277 Nov 20 j 23:22	0°♌		minimum elong		-4272 Nov 10 j 09:50	17°♌35'26	0°20'00
asc. node	-4276 Jan 06 j 04:15	24°♌58'27				-4272 Nov 26 j 04:44	0°♌	
	-4276 Jan 14 j 21:32	0°♌				-4271 Jan 03 j 10:11	0°♌	
	-4276 Mar 05 j 08:45	0°♌		morning rise		-4271 Jan 16 j 14:38	10°♌14'16	
	-4276 Apr 23 j 06:24	0°♌				-4271 Feb 11 j 10:40	0°♌	
	-4276 Jun 09 j 17:58	0°♌				-4271 Mar 24 j 01:34	0°♌	
evening set	-4276 Jun 13 j 19:18	2°♌36'44				-4271 May 06 j 00:55	0°♌	
max. Earth dist.	-4276 Jul 08 j 06:46	18°♌34'24	2.60813 AU			-4271 Jun 21 j 06:17	0°♌	
	-4276 Jul 25 j 11:16	0°♌				-4271 Aug 12 j 06:21	0°♌	
				asc. node		-4271 Aug 28 j 05:38	7°♌58'09	
conjunction	-4276 Jul 30 j 23:18	3°♌41'49	1°11'02	retrograde		-4271 Oct 30 j 18:28	26°♌08'51	
minimum elong	-4276 Jul 30 j 23:29	3°♌42'08	1°11'13	opposition		-4271 Dec 09 j 07:30	16°♌42'16	3°26'48
	-4276 Sep 07 j 05:49	0°♌		greatest brilliancy		-4271 Dec 09 j 11:41	16°♌38'07	-1.3m
morning rise	-4276 Sep 16 j 14:27	6°♌35'29		min. Earth dist.		-4271 Dec 10 j 21:49	16°♌04'04	0.66899 AU
	-4276 Oct 19 j 04:12	0°♌		direct		-4270 Jan 19 j 06:23	6°♌45'04	
	-4276 Nov 28 j 15:28	0°♌				-4270 Apr 03 j 13:20	0°♌	
	-4275 Jan 07 j 05:03	0°♌				-4270 May 25 j 22:04	0°♌	
desc. node	-4275 Jan 08 j 15:29	1°♌05'39				-4270 Jul 10 j 04:07	0°♌	
	-4275 Feb 15 j 15:37	0°♌				-4270 Aug 20 j 17:30	0°♌	
	-4275 Mar 28 j 01:25	0°♌		desc. node		-4270 Aug 31 j 08:27	7°♌58'12	
	-4275 May 10 j 06:52	0°♌				-4270 Sep 29 j 01:58	0°♌	
	-4275 Jun 30 j 23:46	0°♌				-4270 Nov 06 j 08:35	0°♌	
retrograde	-4275 Aug 21 j 06:13	14°♌15'27		evening set		-4270 Nov 15 j 06:21	7°♌00'56	
min. Earth dist.	-4275 Sep 23 j 17:31	6°♌45'00	0.58112 AU			-4270 Dec 14 j 13:56	0°♌	
opposition	-4275 Sep 29 j 12:38	4°♌28'01	-2°-16'-28					
greatest brilliancy	-4275 Sep 28 j 21:12	4°♌43'14	-1.7m	conjunction		-4269 Jan 19 j 14:50	27°♌42'00	-1°-7'-50
	-4275 Oct 11 j 19:34	30°♌		minimum elong		-4269 Jan 19 j 14:27	27°♌41'16	1°08'03
direct	-4275 Nov 05 j 04:49	26°♌02'11				-4269 Jan 22 j 15:55	0°♌	
asc. node	-4275 Nov 23 j 04:41	27°♌55'56				-4269 Mar 04 j 08:15	0°♌	
	-4275 Dec 01 j 21:47	0°♌		max. Earth dist.		-4269 Mar 08 j 03:31	2°♌43'52	2.45787 AU
	-4274 Feb 08 j 20:10	0°♌		morning rise		-4269 Mar 23 j 15:48	13°♌44'17	
	-4274 Apr 02 j 20:44	0°♌				-4269 Apr 16 j 03:15	0°♌	
	-4274 May 21 j 19:59	0°♌				-4269 May 31 j 07:31	0°♌	
	-4274 Jul 06 j 22:26	0°♌		asc. node		-4269 Jul 16 j 05:38	28°♌47'11	
evening set	-4274 Jul 24 j 21:58	12°♌11'16				-4269 Jul 18 j 05:43	0°♌	
max. Earth dist.	-4274 Aug 09 j 15:49	23°♌05'33	2.50599 AU			-4269 Sep 08 j 15:04	0°♌	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 14

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4269 Nov 24 j 21:16	0°☿				-4264 Oct 04 j 13:02	0°♊		
retrograde	-4269 Dec 07 j 11:21	0°☿55'19				-4264 Nov 17 j 14:58	0°♋		
	-4269 Dec 19 j 11:35	30°♌				-4264 Dec 31 j 23:21	0°♍		
opposition	-4268 Jan 14 j 10:13	22°♌19'58	4°58'46			-4263 Feb 15 j 09:07	0°♎		
greatest brilliancy	-4268 Jan 15 j 13:46	21°♌53'25	-1.5m	asc. node		-4263 Mar 06 j 21:01	12°♎39'20		
min. Earth dist.	-4268 Jan 19 j 19:14	20°♌15'40	0.61848 AU			-4263 Apr 02 j 20:44	0°♏		
direct	-4268 Feb 24 j 09:45	12°♌24'51		evening set		-4263 Apr 22 j 06:17	12°♏22'51		
	-4268 Apr 24 j 21:16	0°☿				-4263 May 19 j 22:34	0°♐		
	-4268 Jun 15 j 13:43	0°♑		max. Earth dist.		-4263 Jun 04 j 12:03	9°♐54'54	2.67044 AU	
desc. node	-4268 Jul 18 j 06:58	22°♑19'16							
	-4268 Jul 28 j 23:32	0°♒		conjunction		-4263 Jun 08 j 15:54	12°♐34'08	0°47'57	
	-4268 Sep 07 j 02:02	0°♓		minimum elong		-4263 Jun 08 j 14:37	12°♐32'05	0°48'05	
	-4268 Oct 15 j 19:01	0°♈				-4263 Jul 05 j 21:01	0°♑		
	-4268 Nov 23 j 09:24	0°♊		morning rise		-4263 Jul 24 j 00:33	11°♑42'58		
	-4267 Jan 01 j 21:05	0°♋				-4263 Aug 21 j 01:17	0°☿		
evening set	-4267 Jan 19 j 09:28	12°♋57'19				-4263 Oct 05 j 04:52	0°♑		
	-4267 Feb 11 j 23:16	0°♌				-4263 Nov 18 j 09:21	0°♒		
						-4263 Dec 31 j 23:17	0°♓		
conjunction	-4267 Mar 18 j 00:21	23°♌49'24	0°-41'-42			-4262 Feb 13 j 17:20	0°♈		
minimum elong	-4267 Mar 18 j 02:15	23°♌52'38	0°41'50	desc. node		-4262 Mar 10 j 09:21	16°♈22'37		
	-4267 Mar 27 j 01:20	0°♉				-4262 Apr 01 j 02:59	0°♊		
max. Earth dist.	-4267 Apr 15 j 10:08	13°♉02'38	2.57771 AU	retrograde		-4262 Jun 15 j 02:32	28°♊23'54		
morning rise	-4267 May 10 j 04:02	29°♉22'01		min. Earth dist.		-4262 Jul 11 j 20:56	23°♊46'35	0.41411 AU	
	-4267 May 11 j 03:19	0°♋		greatest brilliancy		-4262 Jul 17 j 01:17	22°♊10'21	-2.6m	
asc. node	-4267 Jun 02 j 03:43	14°♋13'54		opposition		-4262 Jul 19 j 01:19	21°♊32'54	-6°-28'-33	
	-4267 Jun 26 j 23:18	0°♌		direct		-4262 Aug 18 j 21:54	15°♊49'22		
	-4267 Aug 14 j 10:19	0°♍				-4262 Oct 10 j 12:50	0°♋		
	-4267 Oct 04 j 10:17	0°☿				-4262 Dec 05 j 13:51	0°♌		
	-4267 Dec 03 j 00:29	0°♑		asc. node		-4261 Jan 22 j 19:34	28°♌57'58		
retrograde	-4266 Jan 22 j 17:37	12°♑14'23				-4261 Jan 24 j 12:12	0°♉		
opposition	-4266 Feb 26 j 16:56	5°♑04'14	4°42'55			-4261 Mar 14 j 06:04	0°♋		
greatest brilliancy	-4266 Feb 28 j 15:30	4°♑23'09	-2.0m			-4261 May 01 j 09:57	0°♌		
min. Earth dist.	-4266 Mar 07 j 00:15	2°♑09'33	0.50950 AU	evening set		-4261 May 30 j 19:35	18°♌35'20		
	-4266 Mar 13 j 18:04	30°♒☿				-4261 Jun 17 j 15:04	0°♍		
direct	-4266 Apr 06 j 06:10	26°☿17'35		max. Earth dist.		-4261 Jun 28 j 22:34	7°♍19'05	2.63606 AU	
	-4266 Apr 30 j 14:19	0°♑							
desc. node	-4266 Jun 05 j 07:15	15°♑14'55		conjunction		-4261 Jul 16 j 11:54	18°♍47'55	1°09'57	
	-4266 Jun 30 j 09:12	0°♒		minimum elong		-4261 Jul 16 j 11:24	18°♍47'05	1°10'08	
	-4266 Aug 13 j 06:28	0°♓				-4261 Aug 02 j 09:15	0°☿		
	-4266 Sep 22 j 19:15	0°♈		morning rise		-4261 Aug 31 j 16:55	19°☿50'31		
	-4266 Nov 01 j 16:00	0°♊				-4261 Sep 15 j 10:05	0°♑		
	-4266 Dec 12 j 05:14	0°♋				-4261 Oct 27 j 18:42	0°♒		
	-4265 Jan 23 j 05:39	0°♌				-4261 Dec 07 j 18:43	0°♓		
	-4265 Mar 08 j 01:24	0°♉				-4260 Jan 16 j 22:27	0°♊		
evening set	-4265 Mar 12 j 03:27	2°♉44'08		desc. node		-4260 Jan 26 j 10:26	7°♊07'55		
asc. node	-4265 Apr 19 j 23:46	28°♉19'56				-4260 Feb 26 j 01:05	0°♋		
	-4265 Apr 22 j 13:21	0°♌				-4260 Apr 07 j 11:30	0°♋		
						-4260 May 23 j 08:33	0°♌		
conjunction	-4265 May 01 j 22:17	6°♌04'15	0°06'49	retrograde		-4260 Aug 05 j 03:44	27°♌01'30		
minimum elong	-4265 May 01 j 22:00	6°♌03'48	0°06'49	min. Earth dist.		-4260 Sep 05 j 13:16	20°♌17'49	0.53746 AU	
behind sun begin	-4265 May 01 j 03:25	5°♌33'48		greatest brilliancy		-4260 Sep 11 j 09:11	18°♌04'18	-1.9m	
behind sun end	-4265 May 02 j 16:35	6°♌33'48		opposition		-4260 Sep 12 j 14:32	17°♌36'10	-3°-42'-46	
max. Earth dist.	-4265 May 12 j 15:51	12°♌59'22	2.65102 AU	direct		-4260 Oct 17 j 20:31	9°♌45'48		
	-4265 Jun 08 j 05:34	0°♍		asc. node		-4260 Dec 09 j 18:42	23°♌15'41		
morning rise	-4265 Jun 18 j 11:40	6°♍31'58				-4260 Dec 24 j 14:49	0°♉		
	-4265 Jul 25 j 11:06	0°♍				-4259 Feb 18 j 22:38	0°♋		
	-4265 Sep 10 j 21:37	0°☿				-4259 Apr 10 j 19:13	0°♌		
	-4265 Oct 28 j 19:33	0°♑				-4259 May 29 j 00:52	0°♍		
	-4265 Dec 17 j 14:09	0°♒		evening set		-4259 Jul 08 j 07:16	26°♍14'05		
	-4264 Feb 13 j 19:05	0°♓				-4259 Jul 13 j 22:25	0°☿		
retrograde	-4264 Mar 31 j 01:50	11°♓01'43		max. Earth dist.		-4259 Jul 26 j 16:56	8°♓37'43	2.55101 AU	
desc. node	-4264 Apr 22 j 07:38	8°♓05'27							
opposition	-4264 Apr 30 j 21:35	5°♓49'04	0°-37'-42	conjunction		-4259 Aug 26 j 05:25	29°♓47'03	1°01'26	
greatest brilliancy	-4264 May 01 j 01:01	5°♓46'40	-2.8m	minimum elong		-4259 Aug 26 j 06:52	29°♓49'36	1°01'36	
min. Earth dist.	-4264 May 05 j 08:02	4°♓34'55	0.39121 AU			-4259 Aug 26 j 12:46	0°♑		
direct	-4264 Jun 02 j 01:04	0°♓04'00				-4259 Oct 07 j 01:20	0°♒		
	-4264 Aug 19 j 05:36	0°♈		morning rise		-4259 Oct 16 j 16:57	7°♒09'29		

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4259 Nov 15 j 23:37	0°♄		retrograde	-4254 Nov 22 j 03:17	17°♄10'05	
desc. node	-4259 Dec 13 j 08:15	21°♄00'56		opposition	-4254 Dec 30 j 20:18	8°♄11'38	4°31'11
	-4259 Dec 24 j 23:06	0°♄		greatest brilliancy	-4254 Dec 31 j 13:32	7°♄54'44	-1.3m
	-4258 Feb 01 j 18:34	0°♄		min. Earth dist.	-4253 Jan 03 j 17:58	6°♄39'47	0.64578 AU
	-4258 Mar 13 j 08:34	0°♄			-4253 Jan 24 j 09:33	30°♄	
	-4258 Apr 23 j 21:31	0°♄		direct	-4253 Feb 10 j 00:27	28°♄10'45	
	-4258 Jun 08 j 10:15	0°♄			-4253 Feb 27 j 15:12	0°♄	
	-4258 Aug 05 j 04:21	0°♄			-4253 May 09 j 09:50	0°♄	
retrograde	-4258 Sep 13 j 06:30	8°♄28'29			-4253 Jun 26 j 05:16	0°♄	
	-4258 Oct 19 j 11:24	30°♄		desc. node	-4253 Aug 05 j 00:34	28°♄05'44	
min. Earth dist.	-4258 Oct 19 j 12:51	29°♄58'33	0.63325 AU		-4253 Aug 07 j 14:47	0°♄	
opposition	-4258 Oct 23 j 04:06	28°♄30'51	0°-11'-5		-4253 Sep 16 j 07:27	0°♄	
greatest brilliancy	-4258 Oct 23 j 03:15	28°♄31'43	-1.5m		-4253 Oct 24 j 18:41	0°♄	
asc. node	-4258 Oct 27 j 19:42	26°♄40'14			-4253 Dec 02 j 03:58	0°♄	
direct	-4258 Nov 30 j 16:06	19°♄23'47		evening set	-4253 Dec 27 j 03:09	19°♄11'32	
	-4257 Jan 16 j 13:52	0°♄			-4252 Jan 10 j 10:17	0°♄	
	-4257 Mar 19 j 03:48	0°♄			-4252 Feb 20 j 07:05	0°♄	
	-4257 May 09 j 04:59	0°♄					
	-4257 Jun 24 j 23:54	0°♄		conjunction	-4252 Feb 26 j 07:33	4°♄18'05	0°-57'-26
	-4257 Aug 07 j 16:00	0°♄		minimum elong	-4252 Feb 26 j 09:39	4°♄21'50	0°57'35
evening set	-4257 Aug 22 j 20:04	10°♄51'57		max. Earth dist.	-4252 Apr 02 j 18:02	29°♄41'52	2.53526 AU
max. Earth dist.	-4257 Sep 09 j 15:20	23°♄53'31	2.43000 AU		-4252 Apr 03 j 04:40	0°♄	
	-4257 Sep 17 j 20:32	0°♄		morning rise	-4252 Apr 22 j 20:45	13°♄16'33	
					-4252 May 18 j 05:29	0°♄	
conjunction	-4257 Oct 17 j 13:20	22°♄30'48	0°09'45	asc. node	-4252 Jun 18 j 19:40	20°♄16'18	
minimum elong	-4257 Oct 17 j 14:02	22°♄32'09	0°09'46		-4252 Jul 04 j 07:34	0°♄	
behind sun begin	-4257 Oct 16 j 17:37	21°♄52'59			-4252 Aug 22 j 17:55	0°♄	
behind sun end	-4257 Oct 18 j 10:26	23°♄11'21			-4252 Oct 16 j 00:52	0°♄	
	-4257 Oct 27 j 06:25	0°♄		retrograde	-4251 Jan 02 j 14:25	25°♄01'31	
desc. node	-4257 Oct 31 j 04:56	3°♄02'59		opposition	-4251 Feb 07 j 21:52	17°♄12'40	5°09'33
	-4257 Dec 04 j 16:52	0°♄		greatest brilliancy	-4251 Feb 09 j 16:24	16°♄33'20	-1.7m
morning rise	-4257 Dec 19 j 15:54	11°♄44'26		min. Earth dist.	-4251 Feb 15 j 07:45	14°♄28'46	0.55783 AU
	-4256 Jan 12 j 00:29	0°♄		direct	-4251 Mar 19 j 19:32	7°♄47'04	
	-4256 Feb 20 j 02:27	0°♄			-4251 May 26 j 04:07	0°♄	
	-4256 Mar 31 j 19:27	0°♄		desc. node	-4251 Jun 21 j 23:26	16°♄02'14	
	-4256 May 14 j 01:13	0°♄			-4251 Jul 12 j 23:04	0°♄	
	-4256 Jun 30 j 06:00	0°♄			-4251 Aug 23 j 13:15	0°♄	
	-4256 Aug 25 j 22:35	0°♄			-4251 Oct 02 j 01:23	0°♄	
asc. node	-4256 Sep 13 j 21:31	7°♄17'04			-4251 Nov 10 j 05:48	0°♄	
retrograde	-4256 Oct 17 j 05:02	13°♄17'33			-4251 Dec 20 j 05:48	0°♄	
opposition	-4256 Nov 26 j 01:17	3°♄37'17	2°35'22		-4250 Jan 30 j 19:05	0°♄	
greatest brilliancy	-4256 Nov 25 j 23:58	3°♄38'36	-1.3m	evening set	-4250 Feb 21 j 13:22	15°♄11'30	
min. Earth dist.	-4256 Nov 26 j 03:36	3°♄34'58	0.67121 AU		-4250 Mar 15 j 05:53	0°♄	
	-4256 Dec 05 j 07:47	30°♄					
direct	-4255 Jan 05 j 13:25	23°♄48'53		conjunction	-4250 Apr 15 j 13:05	20°♄51'28	0°-12'-7
	-4255 Feb 09 j 03:02	0°♄		minimum elong	-4250 Apr 15 j 13:38	20°♄52'22	0°12'10
	-4255 Apr 14 j 20:55	0°♄		behind sun begin	-4250 Apr 14 j 23:59	20°♄29'56	
	-4255 Jun 03 j 12:26	0°♄		behind sun end	-4250 Apr 16 j 03:17	21°♄14'47	
	-4255 Jul 18 j 01:02	0°♄			-4250 Apr 29 j 12:15	0°♄	
	-4255 Aug 28 j 09:04	0°♄		max. Earth dist.	-4250 May 02 j 16:24	2°♄03'56	2.62863 AU
desc. node	-4255 Sep 17 j 02:34	14°♄55'02		asc. node	-4250 May 06 j 16:51	4°♄40'31	
	-4255 Oct 06 j 16:01	0°♄		morning rise	-4250 Jun 03 j 19:35	22°♄46'04	
evening set	-4255 Oct 19 j 11:33	9°♄59'52			-4250 Jun 15 j 03:54	0°♄	
	-4255 Nov 13 j 22:02	0°♄			-4250 Aug 01 j 17:11	0°♄	
	-4255 Dec 22 j 02:19	0°♄			-4250 Sep 19 j 02:28	0°♄	
					-4250 Nov 08 j 07:54	0°♄	
conjunction	-4255 Dec 23 j 11:49	1°♄05'20	0°-58'-45		-4249 Jan 04 j 10:41	0°♄	
minimum elong	-4255 Dec 23 j 08:58	0°♄59'45	0°58'55	retrograde	-4249 Mar 02 j 04:15	15°♄07'55	
	-4254 Jan 30 j 02:31	0°♄		opposition	-4249 Apr 03 j 12:49	9°♄12'39	2°22'05
max. Earth dist.	-4254 Feb 08 j 17:34	7°♄14'21	2.40666 AU	greatest brilliancy	-4249 Apr 04 j 15:08	8°♄52'22	-2.5m
morning rise	-4254 Feb 28 j 05:38	21°♄40'09		min. Earth dist.	-4249 Apr 11 j 05:39	6°♄50'50	0.43023 AU
	-4254 Mar 11 j 16:58	0°♄		direct	-4249 May 08 j 14:09	2°♄09'14	
	-4254 Apr 23 j 11:33	0°♄		desc. node	-4249 May 10 j 01:15	2°♄10'07	
	-4254 Jun 07 j 21:14	0°♄			-4249 Jul 21 j 16:22	0°♄	
	-4254 Jul 26 j 18:00	0°♄			-4249 Sep 04 j 22:50	0°♄	
asc. node	-4254 Aug 01 j 21:25	3°♄33'58			-4249 Oct 17 j 02:59	0°♄	
	-4254 Sep 21 j 03:29	0°♄			-4249 Nov 28 j 04:33	0°♄	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 16

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4248 Jan 10 j 07:31	0°♊			-4244 Nov 23 j 15:50	0°♎		
	-4248 Feb 23 j 22:13	0°♋		desc. node	-4244 Dec 30 j 02:00	27°♎46'15		
asc. node	-4248 Mar 23 j 12:45	18°♋44'39			-4243 Jan 01 j 23:45	0°♌		
evening set	-4248 Apr 06 j 14:44	27°♋51'45			-4243 Feb 10 j 03:34	0°♏		
	-4248 Apr 09 j 22:14	0°♍			-4243 Mar 22 j 03:44	0°♐		
					-4243 May 03 j 12:34	0°♑		
conjunction	-4248 May 24 j 23:44	28°♍51'34	0°33'45		-4243 Jun 20 j 17:56	0°♋		
minimum elong	-4248 May 24 j 22:37	28°♍49'48	0°33'50	retrograde	-4243 Aug 29 j 21:48	23°♋44'11		
max. Earth dist.	-4248 May 26 j 11:49	29°♍49'07	2.66933 AU	min. Earth dist.	-4243 Oct 03 j 10:31	15°♋50'49	0.60207 AU	
	-4248 May 26 j 18:39	0°♌		opposition	-4243 Oct 08 j 11:41	13°♋50'13	-1°-28'-38	
morning rise	-4248 Jul 09 j 20:19	28°♌08'21		greatest brilliancy	-4243 Oct 08 j 02:45	13°♋59'07	-1.6m	
	-4248 Jul 12 j 18:03	0°♍		asc. node	-4243 Nov 13 j 10:44	5°♋08'49		
	-4248 Aug 28 j 07:07	0°♎		direct	-4243 Nov 14 j 20:36	5°♋08'03		
	-4248 Oct 13 j 05:28	0°♏			-4242 Feb 01 j 04:44	0°♍		
	-4248 Nov 27 j 19:00	0°♐			-4242 Mar 28 j 06:28	0°♌		
	-4247 Jan 12 j 17:10	0°♎			-4242 May 16 j 20:55	0°♍		
	-4247 Mar 02 j 05:25	0°♌			-4242 Jul 02 j 05:08	0°♎		
desc. node	-4247 Mar 27 j 02:49	13°♌25'35		evening set	-4242 Aug 03 j 23:30	22°♎22'54		
retrograde	-4247 May 19 j 03:21	28°♌41'18			-4242 Aug 14 j 19:33	0°♏		
min. Earth dist.	-4247 Jun 15 j 20:40	24°♌09'48	0.38267 AU	max. Earth dist.	-4242 Aug 19 j 08:23	3°♏13'13	2.47944 AU	
opposition	-4247 Jun 19 j 12:57	23°♌09'01	-5°-33'-33					
greatest brilliancy	-4247 Jun 18 j 13:45	23°♌25'03	-2.8m	conjunction	-4242 Sep 25 j 08:45	0°♐11'29	0°35'16	
direct	-4247 Jul 19 j 11:06	18°♌05'30		minimum elong	-4242 Sep 25 j 10:36	0°♐14'55	0°35'22	
	-4247 Sep 04 j 01:00	0°♏			-4242 Sep 25 j 02:35	0°♐		
	-4247 Oct 29 j 09:09	0°♐			-4242 Nov 03 j 16:29	0°♎		
	-4247 Dec 16 j 17:41	0°♑		desc. node	-4242 Nov 16 j 23:20	10°♎16'07		
	-4246 Feb 02 j 04:19	0°♋		morning rise	-4242 Nov 22 j 08:34	14°♎27'05		
asc. node	-4246 Feb 08 j 10:29	3°♋57'02			-4242 Dec 12 j 07:02	0°♌		
	-4246 Mar 21 j 18:52	0°♍			-4241 Jan 19 j 17:55	0°♏		
	-4246 May 08 j 09:56	0°♌			-4241 Feb 27 j 22:29	0°♐		
evening set	-4246 May 15 j 23:39	4°♌47'33			-4241 Apr 09 j 19:31	0°♑		
max. Earth dist.	-4246 Jun 19 j 03:20	26°♌34'35	2.65579 AU		-4241 May 23 j 12:48	0°♋		
	-4246 Jun 24 j 10:59	0°♍			-4241 Jul 11 j 11:55	0°♍		
					-4241 Sep 27 j 17:29	0°♌		
conjunction	-4246 Jul 01 j 15:38	4°♍38'46	1°04'22	asc. node	-4241 Oct 01 j 11:41	0°♌14'42		
minimum elong	-4246 Jul 01 j 14:37	4°♍37'08	1°04'32	retrograde	-4241 Oct 04 j 18:56	0°♌18'54		
	-4246 Aug 09 j 07:45	0°♎			-4241 Oct 11 j 15:32	30°♌♍		
morning rise	-4246 Aug 16 j 02:51	4°♎31'45		min. Earth dist.	-4241 Nov 12 j 09:56	21°♍01'39	0.66383 AU	
	-4246 Sep 22 j 16:41	0°♏		opposition	-4241 Nov 13 j 19:01	20°♍28'18	1°36'38	
	-4246 Nov 04 j 14:33	0°♐		greatest brilliancy	-4241 Nov 13 j 15:19	20°♍32'02	-1.3m	
	-4246 Dec 16 j 07:52	0°♎		direct	-4241 Dec 23 j 15:58	10°♍52'46		
	-4245 Jan 26 j 08:45	0°♌			-4240 Feb 28 j 10:21	0°♌		
desc. node	-4245 Feb 12 j 02:45	12°♌15'09			-4240 Apr 24 j 08:50	0°♍		
	-4245 Mar 08 j 15:24	0°♏			-4240 Jun 11 j 12:13	0°♎		
	-4245 Apr 21 j 06:41	0°♐			-4240 Jul 25 j 14:06	0°♏		
	-4245 Jun 15 j 12:24	0°♑			-4240 Sep 04 j 19:40	0°♐		
retrograde	-4245 Jul 19 j 03:01	7°♑08'07		evening set	-4240 Sep 24 j 16:48	15°♐01'58		
min. Earth dist.	-4245 Aug 17 j 07:42	1°♑17'14	0.48848 AU	desc. node	-4240 Oct 03 j 19:43	22°♐01'54		
	-4245 Aug 20 j 22:00	30°♑♐			-4240 Oct 14 j 02:57	0°♎		
greatest brilliancy	-4245 Aug 23 j 11:04	29°♐04'26	-2.1m		-4240 Nov 21 j 10:00	0°♌		
opposition	-4245 Aug 25 j 06:29	28°♐24'57	-5°-8'-12					
direct	-4245 Sep 27 j 21:56	21°♐18'59		conjunction	-4240 Nov 25 j 17:27	3°♌23'41	0°-36'-26	
	-4245 Nov 07 j 06:27	0°♑		minimum elong	-4240 Nov 25 j 14:34	3°♌18'00	0°36'31	
asc. node	-4245 Dec 27 j 10:19	23°♑43'35		max. Earth dist.	-4240 Nov 28 j 00:24	5°♌11'54	2.37617 AU	
	-4244 Jan 07 j 22:04	0°♋			-4240 Dec 29 j 14:46	0°♏		
	-4244 Feb 28 j 20:54	0°♍		morning rise	-4239 Feb 01 j 16:54	26°♏17'05		
	-4244 Apr 18 j 08:33	0°♌			-4239 Feb 06 j 14:30	0°♐		
	-4244 Jun 05 j 01:59	0°♍			-4239 Mar 19 j 04:18	0°♑		
evening set	-4244 Jun 22 j 13:33	11°♍17'42			-4239 May 01 j 00:13	0°♋		
max. Earth dist.	-4244 Jul 14 j 16:29	25°♍51'46	2.58985 AU		-4239 Jun 15 j 19:25	0°♍		
	-4244 Jul 20 j 21:05	0°♎			-4239 Aug 05 j 05:44	0°♌		
				asc. node	-4239 Aug 18 j 12:33	7°♌09'09		
conjunction	-4244 Aug 09 j 04:28	13°♎04'23	1°09'15		-4239 Oct 11 j 18:08	0°♍		
minimum elong	-4244 Aug 09 j 05:08	13°♎05'31	1°09'26	retrograde	-4239 Nov 07 j 17:58	3°♍59'49		
	-4244 Sep 02 j 14:27	0°♏			-4239 Dec 02 j 13:09	30°♌♌		
morning rise	-4244 Sep 26 j 21:47	17°♏17'34		opposition	-4239 Dec 17 j 00:42	24°♌42'07	3°52'55	
	-4244 Oct 14 j 09:31	0°♐		greatest brilliancy	-4239 Dec 17 j 08:56	24°♌33'56	-1.3m	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 17

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

min. Earth dist.	-4239 Dec 19 j 10:25	23° U 44'49	0.66356 AU	asc. node	-4233 Apr 10 j 05:05	24° X 59'33	
direct	-4238 Jan 27 j 02:53	14° U 42'05			-4233 Apr 17 j 22:05	0° Y	
	-4238 Mar 25 j 12:07	0° II					
	-4238 May 19 j 22:28	0° S		conjunction	-4233 May 10 j 21:38	14° Y 49'20	0°17'14
	-4238 Jul 04 j 22:04	0° Q		minimum elong	-4233 May 10 j 20:58	14° Y 48'17	0°17'16
	-4238 Aug 15 j 17:49	0° M		max. Earth dist.	-4233 May 18 j 06:04	19° Y 32'14	2.65978 AU
desc. node	-4238 Aug 21 j 18:25	4° M 29'34			-4233 Jun 03 j 14:50	0° X	
	-4238 Sep 24 j 04:40	0° A		morning rise	-4233 Jun 26 j 17:23	14° X 43'27	
greatest brilliancy	-4238 Oct 18 j 13:21	19° A 01'25	1.2m		-4233 Jul 20 j 17:26	0° II	
	-4238 Nov 01 j 12:25	0° M			-4233 Sep 05 j 18:58	0° S	
evening set	-4238 Nov 30 j 17:35	22° M 56'59			-4233 Oct 22 j 20:08	0° Q	
	-4238 Dec 09 j 18:24	0° X			-4233 Dec 09 j 14:39	0° M	
	-4237 Jan 17 j 20:56	0° S			-4232 Jan 29 j 12:42	0° A	
				desc. node	-4232 Apr 12 j 18:28	27° A 39'29	
conjunction	-4237 Feb 03 j 01:54	12° S 06'35	-1°-6'-55	retrograde	-4232 Apr 18 j 00:21	27° A 49'50	
minimum elong	-4237 Feb 03 j 02:54	12° S 08'25	1°07'07	opposition	-4232 May 18 j 12:01	22° A 47'17	-2°-39'-1
	-4237 Feb 27 j 13:55	0° X		greatest brilliancy	-4232 May 18 j 15:37	22° A 44'53	-2.9m
max. Earth dist.	-4237 Mar 19 j 07:31	14° X 01'57	2.48678 AU	min. Earth dist.	-4232 May 20 j 03:14	22° A 21'05	0.37947 AU
morning rise	-4237 Apr 04 j 16:56	25° X 26'02		direct	-4232 Jun 18 j 03:53	17° A 34'14	
	-4237 Apr 11 j 08:39	0° X			-4232 Aug 04 j 00:37	0° M	
	-4237 May 26 j 10:17	0° Y			-4232 Sep 25 j 21:20	0° X	
asc. node	-4237 Jul 06 j 11:12	26° Y 00'47			-4232 Nov 10 j 23:24	0° S	
	-4237 Jul 12 j 22:33	0° X			-4232 Dec 26 j 07:39	0° X	
	-4237 Sep 01 j 21:44	0° II			-4231 Feb 10 j 06:50	0° X	
	-4237 Nov 02 j 12:50	0° S		asc. node	-4231 Feb 25 j 02:34	9° X 33'02	
retrograde	-4237 Dec 16 j 20:17	9° S 37'00			-4231 Mar 29 j 02:16	0° Y	
opposition	-4236 Jan 23 j 06:27	1° S 16'22	5°07'55	evening set	-4231 May 01 j 00:08	20° Y 54'26	
greatest brilliancy	-4236 Jan 24 j 15:41	0° S 44'41	-1.5m		-4231 May 15 j 07:50	0° X	
	-4236 Jan 26 j 14:29	30° R II		max. Earth dist.	-4231 Jun 09 j 21:14	16° X 16'42	2.66742 AU
min. Earth dist.	-4236 Jan 29 j 09:36	28° II 56'21	0.59949 AU				
direct	-4236 Mar 03 j 23:28	21° II 28'22		conjunction	-4231 Jun 17 j 01:08	20° X 51'31	0°54'56
	-4236 Apr 12 j 12:55	0° S		minimum elong	-4231 Jun 16 j 23:52	20° X 49'29	0°55'05
	-4236 Jun 08 j 17:30	0° Q			-4231 Jul 01 j 06:46	0° II	
desc. node	-4236 Jul 08 j 17:49	19° Q 49'15		morning rise	-4231 Aug 01 j 07:36	20° II 08'01	
	-4236 Jul 23 j 05:06	0° M			-4231 Aug 16 j 08:08	0° S	
	-4236 Sep 01 j 17:26	0° A			-4231 Sep 30 j 04:24	0° Q	
	-4236 Oct 10 j 15:45	0° M			-4231 Nov 12 j 20:36	0° M	
	-4236 Nov 18 j 09:44	0° X			-4231 Dec 25 j 15:16	0° A	
	-4236 Dec 28 j 00:13	0° S			-4230 Feb 06 j 02:42	0° M	
evening set	-4235 Feb 01 j 01:32	25° S 36'52		desc. node	-4230 Feb 28 j 20:12	15° M 50'48	
	-4235 Feb 07 j 04:55	0° X			-4230 Mar 21 j 17:25	0° X	
	-4235 Mar 22 j 08:39	0° X			-4230 May 11 j 01:39	0° S	
				retrograde	-4230 Jun 28 j 10:29	13° S 47'27	
conjunction	-4235 Mar 28 j 21:23	4° X 25'17	0°-31'-9	min. Earth dist.	-4230 Jul 25 j 16:29	8° S 49'08	0.43870 AU
minimum elong	-4235 Mar 28 j 22:50	4° X 27'44	0°31'15	greatest brilliancy	-4230 Jul 31 j 12:58	6° S 53'39	-2.4m
max. Earth dist.	-4235 Apr 22 j 03:06	20° X 35'44	2.59799 AU	opposition	-4230 Aug 02 j 16:02	6° S 11'16	-6°-14'-23
	-4235 May 06 j 11:04	0° Y			-4230 Sep 01 j 07:57	30° R X	
morning rise	-4235 May 19 j 11:20	8° Y 27'03		direct	-4230 Sep 03 j 12:11	29° X 58'08	
asc. node	-4235 May 23 j 07:53	10° Y 56'24			-4230 Sep 05 j 16:41	0° S	
	-4235 Jun 22 j 04:13	0° X			-4230 Nov 27 j 03:37	0° X	
	-4235 Aug 09 j 05:23	0° II		asc. node	-4229 Jan 13 j 01:17	26° X 47'57	
	-4235 Sep 28 j 00:33	0° S			-4229 Jan 18 j 10:38	0° X	
	-4235 Nov 21 j 12:57	0° Q			-4229 Mar 09 j 01:53	0° Y	
retrograde	-4234 Feb 04 j 11:40	23° Q 30'47			-4229 Apr 26 j 15:24	0° X	
opposition	-4234 Mar 10 j 15:22	16° Q 45'35	4°08'27	evening set	-4229 Jun 08 j 09:13	27° X 01'21	
greatest brilliancy	-4234 Mar 12 j 11:23	16° Q 08'14	-2.2m		-4229 Jun 13 j 00:29	0° II	
min. Earth dist.	-4234 Mar 19 j 03:28	13° Q 53'51	0.48089 AU	max. Earth dist.	-4229 Jul 04 j 20:00	14° II 09'02	2.62155 AU
direct	-4234 Apr 17 j 03:33	8° Q 29'59					
desc. node	-4234 May 26 j 17:08	17° Q 46'25		conjunction	-4229 Jul 25 j 06:38	27° II 39'10	1°11'10
	-4234 Jun 20 j 04:40	0° M		minimum elong	-4229 Jul 25 j 06:31	27° II 38'58	1°11'22
	-4234 Aug 06 j 00:13	0° A			-4229 Jul 28 j 19:01	0° S	
	-4234 Sep 16 j 13:35	0° M		morning rise	-4229 Sep 10 j 04:17	29° S 37'43	
	-4234 Oct 27 j 00:15	0° X			-4229 Sep 10 j 17:04	0° Q	
	-4234 Dec 06 j 22:56	0° S			-4229 Oct 22 j 20:42	0° M	
	-4233 Jan 18 j 06:26	0° X			-4229 Dec 02 j 13:51	0° A	
	-4233 Mar 03 j 07:05	0° X			-4228 Jan 11 j 09:35	0° M	
evening set	-4233 Mar 22 j 02:09	12° X 28'12		desc. node	-4228 Jan 16 j 18:54	4° M 04'55	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 18

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4228 Feb 20 j 02:17	0°♂		direct	-4223 Jan 13 j 11:01	1°♂41'21	
	-4228 Mar 31 j 20:05	0°♂			-4223 Apr 07 j 21:00	0°♂	
	-4228 May 14 j 20:18	0°♂			-4223 May 29 j 00:34	0°♂	
	-4228 Jul 10 j 03:16	0°♂			-4223 Jul 13 j 00:09	0°♂	
retrograde	-4228 Aug 14 j 12:59	7°♂31'40			-4223 Aug 23 j 12:26	0°♂	
min. Earth dist.	-4228 Sep 16 j 02:47	0°♂21'17	0.56238 AU	desc. node	-4223 Sep 07 j 12:24	11°♂17'18	
	-4228 Sep 17 j 00:52	30°♂			-4223 Oct 01 j 20:52	0°♂	
opposition	-4228 Sep 22 j 11:52	27°♂52'07	-2°-52'-46	evening set	-4223 Nov 03 j 09:25	25°♂28'13	
greatest brilliancy	-4228 Sep 21 j 14:39	28°♂12'50	-1.8m		-4223 Nov 09 j 03:25	0°♂	
direct	-4228 Oct 28 j 12:50	19°♂41'22			-4223 Dec 17 j 07:58	0°♂	
asc. node	-4228 Nov 30 j 01:17	25°♂24'07					
	-4228 Dec 13 j 00:05	0°♂		conjunction	-4222 Jan 07 j 23:43	16°♂46'24	-1°-5'-38
	-4227 Feb 12 j 13:26	0°♂		minimum elong	-4222 Jan 07 j 22:09	16°♂43'23	1°05'50
	-4227 Apr 05 j 13:56	0°♂			-4222 Jan 25 j 08:11	0°♂	
	-4227 May 24 j 06:01	0°♂		max. Earth dist.	-4222 Feb 25 j 20:43	23°♂25'17	2.43432 AU
	-4227 Jul 09 j 07:31	0°♂			-4222 Mar 06 j 22:22	0°♂	
evening set	-4227 Jul 17 j 15:27	5°♂36'29		morning rise	-4222 Mar 13 j 21:10	4°♂59'31	
max. Earth dist.	-4227 Aug 03 j 09:34	17°♂03'35	2.52678 AU		-4222 Apr 18 j 15:29	0°♂	
	-4227 Aug 21 j 22:05	0°♂			-4222 Jun 02 j 20:07	0°♂	
					-4222 Jul 21 j 00:49	0°♂	
conjunction	-4227 Sep 05 j 14:13	10°♂27'25	0°53'58	asc. node	-4222 Jul 23 j 02:39	1°♂14'23	
minimum elong	-4227 Sep 05 j 16:00	10°♂30'37	0°54'05		-4222 Sep 12 j 15:29	0°♂	
	-4227 Oct 02 j 08:51	0°♂		retrograde	-4222 Nov 30 j 19:01	25°♂24'21	
morning rise	-4227 Oct 29 j 02:36	20°♂02'57		opposition	-4221 Jan 08 j 02:13	16°♂37'55	4°48'20
	-4227 Nov 11 j 03:54	0°♂		greatest brilliancy	-4221 Jan 09 j 01:01	16°♂15'44	-1.4m
desc. node	-4227 Dec 03 j 17:21	17°♂22'42		min. Earth dist.	-4221 Jan 12 j 19:09	14°♂48'07	0.63197 AU
	-4227 Dec 19 j 23:41	0°♂		direct	-4221 Feb 18 j 04:18	6°♂39'16	
	-4226 Jan 27 j 15:21	0°♂			-4221 May 01 j 11:16	0°♂	
	-4226 Mar 08 j 00:37	0°♂			-4221 Jun 20 j 06:14	0°♂	
	-4226 Apr 18 j 05:27	0°♂		desc. node	-4221 Jul 26 j 10:24	25°♂03'37	
	-4226 Jun 01 j 19:59	0°♂			-4221 Aug 02 j 05:52	0°♂	
	-4226 Jul 24 j 12:02	0°♂			-4221 Sep 11 j 04:18	0°♂	
retrograde	-4226 Sep 21 j 05:32	16°♂54'39			-4221 Oct 19 j 18:41	0°♂	
asc. node	-4226 Oct 18 j 02:22	12°♂01'11			-4221 Nov 27 j 06:19	0°♂	
min. Earth dist.	-4226 Oct 28 j 09:09	8°♂06'48	0.64688 AU		-4220 Jan 05 j 14:35	0°♂	
opposition	-4226 Oct 31 j 05:25	6°♂58'02	0°30'35	evening set	-4220 Jan 10 j 03:57	3°♂24'21	
greatest brilliancy	-4226 Oct 31 j 03:14	7°♂00'14	-1.4m		-4220 Feb 15 j 13:10	0°♂	
	-4226 Nov 20 j 10:15	30°♂					
direct	-4226 Dec 09 j 06:38	27°♂39'39		conjunction	-4220 Mar 09 j 08:54	16°♂07'33	0°-48'-54
	-4226 Dec 29 j 16:42	0°♂		minimum elong	-4220 Mar 09 j 11:01	16°♂11'13	0°49'01
	-4225 Mar 12 j 12:22	0°♂			-4220 Mar 29 j 11:50	0°♂	
	-4225 May 03 j 21:41	0°♂		max. Earth dist.	-4220 Apr 10 j 08:46	8°♂02'43	2.55955 AU
	-4225 Jun 20 j 03:20	0°♂		morning rise	-4220 May 02 j 22:46	23°♂05'08	
	-4225 Aug 02 j 23:08	0°♂			-4220 May 13 j 11:55	0°♂	
evening set	-4225 Sep 03 j 08:33	22°♂42'00		asc. node	-4220 Jun 09 j 01:06	17°♂07'47	
	-4225 Sep 13 j 04:31	0°♂			-4220 Jun 29 j 09:00	0°♂	
max. Earth dist.	-4225 Sep 26 j 02:27	9°♂42'54	2.40456 AU		-4220 Aug 17 j 03:58	0°♂	
desc. node	-4225 Oct 21 j 15:15	29°♂16'44			-4220 Oct 08 j 06:14	0°♂	
	-4225 Oct 22 j 13:36	0°♂			-4220 Dec 14 j 00:32	0°♂	
				retrograde	-4219 Jan 13 j 15:40	4°♂59'34	
conjunction	-4225 Oct 31 j 06:18	6°♂45'13	0°-6'-56		-4219 Feb 11 j 02:42	30°♂	
minimum elong	-4225 Oct 31 j 05:44	6°♂44'06	0°06'57	opposition	-4219 Feb 18 j 06:48	27°♂30'54	4°58'03
behind sun begin	-4225 Oct 30 j 05:41	5°♂57'20		greatest brilliancy	-4219 Feb 20 j 04:22	26°♂49'43	-1.9m
behind sun end	-4225 Nov 01 j 05:47	7°♂30'54		min. Earth dist.	-4219 Feb 26 j 06:16	24°♂38'55	0.53194 AU
	-4225 Nov 29 j 22:36	0°♂		direct	-4219 Mar 29 j 12:19	18°♂24'24	
morning rise	-4224 Jan 04 j 22:00	28°♂13'31			-4219 May 14 j 04:03	0°♂	
	-4224 Jan 07 j 04:36	0°♂		desc. node	-4219 Jun 12 j 10:18	15°♂24'05	
	-4224 Feb 15 j 04:39	0°♂			-4219 Jul 05 j 16:17	0°♂	
	-4224 Mar 26 j 18:59	0°♂			-4219 Aug 17 j 09:38	0°♂	
	-4224 May 08 j 18:55	0°♂			-4219 Sep 26 j 10:01	0°♂	
	-4224 Jun 24 j 06:35	0°♂			-4219 Nov 04 j 22:18	0°♂	
	-4224 Aug 16 j 14:33	0°♂			-4219 Dec 15 j 04:06	0°♂	
asc. node	-4224 Sep 04 j 02:49	8°♂33'43			-4218 Jan 25 j 22:04	0°♂	
retrograde	-4224 Oct 24 j 23:57	21°♂08'18		evening set	-4218 Mar 04 j 08:21	25°♂49'50	
opposition	-4224 Dec 03 j 16:29	11°♂35'01	3°06'10		-4218 Mar 10 j 12:25	0°♂	
greatest brilliancy	-4224 Dec 03 j 17:51	11°♂33'40	-1.3m		-4218 Apr 24 j 20:49	0°♂	
min. Earth dist.	-4224 Dec 04 j 14:16	11°♂13'14	0.67130 AU				

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 19

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

conjunction	-4218 Apr 25 j 01:20	0°Υ07'21	0°-1'4			-4213 May 31 j 02:07	0°≈	
minimum elong	-4218 Apr 25 j 01:21	0°Υ07'22	0°01'06	retrograde		-4213 Jul 29 j 16:43	19°≈15'03	
behind sun begin	-4218 Apr 24 j 04:50	29°Χ33'59		min. Earth dist.		-4213 Aug 29 j 03:09	12°≈54'00	0.51599 AU
behind sun end	-4218 Apr 25 j 21:53	0°Υ40'45		greatest brilliancy		-4213 Sep 04 j 03:25	10°≈39'05	-2.0m
asc. node	-4218 Apr 26 j 21:36	1°Υ19'19		opposition		-4213 Sep 05 j 15:14	10°≈05'24	-4°-20'-8
max. Earth dist.	-4218 May 08 j 12:22	8°Υ50'58	2.64204 AU	direct		-4213 Oct 10 j 04:01	2°≈33'43	
	-4218 Jun 10 j 11:55	0°Ϣ		asc. node		-4213 Dec 17 j 15:47	23°≈19'43	
morning rise	-4218 Jun 12 j 07:23	1°Ϣ09'14				-4213 Dec 30 j 23:53	0°Χ	
	-4218 Jul 27 j 20:17	0°Π				-4212 Feb 23 j 03:03	0°Υ	
	-4218 Sep 13 j 15:33	0°Ϣ				-4212 Apr 13 j 08:37	0°Ϣ	
	-4218 Nov 01 j 09:39	0°Ω				-4212 May 31 j 09:30	0°Π	
	-4218 Dec 23 j 09:45	0°ϣ		evening set		-4212 Jul 01 j 11:27	20°Π09'31	
retrograde	-4217 Mar 18 j 14:16	29°ϣ37'04				-4212 Jul 16 j 06:59	0°Ϣ	
opposition	-4217 Apr 18 j 23:43	24°ϣ07'42	0°48'19	max. Earth dist.		-4212 Jul 21 j 11:15	3°Ϣ28'40	2.56930 AU
greatest brilliancy	-4217 Apr 19 j 07:55	24°ϣ01'43	-2.7m					
min. Earth dist.	-4217 Apr 25 j 04:27	22°ϣ19'32	0.40641 AU	conjunction		-4212 Aug 18 j 17:26	22°Ϣ49'15	1°05'32
desc. node	-4217 Apr 30 j 10:51	20°ϣ53'19		minimum elong		-4212 Aug 18 j 18:33	22°Ϣ51'13	1°05'42
direct	-4217 May 22 j 10:56	17°ϣ48'45				-4212 Aug 28 j 23:40	0°Ω	
	-4217 Jul 06 j 23:21	0°Ϣ		morning rise		-4212 Oct 07 j 20:04	28°Ω39'10	
	-4217 Aug 27 j 07:44	0°ϣ				-4212 Oct 09 j 16:06	0°ϣ	
	-4217 Oct 10 j 07:28	0°ϣ				-4212 Nov 18 j 18:32	0°Ϣ	
	-4217 Nov 22 j 07:44	0°Ϣ		desc. node		-4212 Dec 20 j 11:54	24°Ϣ17'09	
	-4216 Jan 05 j 00:33	0°≈				-4212 Dec 27 j 21:49	0°ϣ	
	-4216 Feb 19 j 00:09	0°Χ				-4211 Feb 04 j 20:34	0°ϣ	
asc. node	-4216 Mar 13 j 18:46	15°Χ30'52				-4211 Mar 16 j 13:34	0°Ϣ	
	-4216 Apr 05 j 05:37	0°Υ				-4211 Apr 27 j 08:03	0°≈	
evening set	-4216 Apr 15 j 15:37	6°Υ40'50				-4211 Jun 12 j 14:58	0°Χ	
	-4216 May 22 j 04:29	0°Ϣ				-4211 Aug 17 j 03:08	0°Υ	
max. Earth dist.	-4216 May 31 j 20:34	6°Ϣ09'44	2.67099 AU	retrograde		-4211 Sep 07 j 06:12	2°Υ45'53	
						-4211 Sep 27 j 02:05	30°ϣΧ	
conjunction	-4216 Jun 02 j 10:30	7°Ϣ10'11	0°42'19	min. Earth dist.		-4211 Oct 12 j 18:08	24°Χ32'04	0.62034 AU
minimum elong	-4216 Jun 02 j 09:15	7°Ϣ08'11	0°42'25	opposition		-4211 Oct 17 j 01:16	22°Χ48'45	0°-42'-43
	-4216 Jul 08 j 03:25	0°Π		greatest brilliancy		-4211 Oct 16 j 21:31	22°Χ52'30	-1.5m
morning rise	-4216 Jul 17 j 23:04	6°Π18'53		asc. node		-4211 Nov 03 j 16:10	16°Χ38'16	
	-4216 Aug 23 j 11:42	0°Ϣ		direct		-4211 Nov 24 j 01:51	13°Χ52'16	
	-4216 Oct 07 j 23:19	0°Ω				-4210 Jan 23 j 02:40	0°Υ	
	-4216 Nov 21 j 17:14	0°ϣ				-4210 Mar 22 j 09:28	0°Ϣ	
	-4215 Jan 05 j 03:50	0°Ϣ				-4210 May 11 j 19:59	0°Π	
	-4215 Feb 19 j 10:07	0°ϣ				-4210 Jun 27 j 11:28	0°Ϣ	
desc. node	-4215 Mar 17 j 12:16	16°ϣ17'55				-4210 Aug 10 j 04:01	0°Ω	
	-4215 Apr 10 j 23:45	0°ϣ		evening set		-4210 Aug 14 j 11:25	3°Ω03'29	
retrograde	-4215 Jun 03 j 22:14	16°ϣ15'41		max. Earth dist.		-4210 Aug 30 j 10:09	14°Ω21'40	2.45205 AU
min. Earth dist.	-4215 Jun 30 j 17:46	11°ϣ47'52	0.39734 AU			-4210 Sep 20 j 10:43	0°ϣ	
greatest brilliancy	-4215 Jul 05 j 01:26	10°ϣ31'56	-2.7m					
opposition	-4215 Jul 06 j 17:14	10°ϣ02'35	-6°-20'-5	conjunction		-4210 Oct 07 j 13:59	12°ϣ52'48	0°21'29
direct	-4215 Aug 05 j 23:40	4°ϣ40'34		minimum elong		-4210 Oct 07 j 15:21	12°ϣ55'24	0°21'32
	-4215 Oct 19 j 07:44	0°Ϣ				-4210 Oct 29 j 23:00	0°Ϣ	
	-4215 Dec 09 j 23:14	0°≈		desc. node		-4210 Nov 07 j 08:39	6°Ϣ30'04	
	-4214 Jan 27 j 15:21	0°Χ		greatest brilliancy		-4210 Nov 20 j 19:25	16°Ϣ57'51	1.2m
asc. node	-4214 Jan 29 j 16:59	1°Χ17'07		morning rise		-4210 Dec 07 j 09:46	29°Ϣ56'50	
	-4214 Mar 16 j 19:53	0°Υ				-4210 Dec 07 j 11:23	0°ϣ	
	-4214 May 03 j 17:43	0°Ϣ				-4209 Jan 14 j 20:13	0°ϣ	
evening set	-4214 May 24 j 11:37	13°Ϣ06'56				-4209 Feb 22 j 22:28	0°Ϣ	
	-4214 Jun 19 j 21:27	0°Π				-4209 Apr 04 j 15:39	0°≈	
max. Earth dist.	-4214 Jun 24 j 18:07	3°Π08'12	2.64597 AU			-4209 May 17 j 23:54	0°Χ	
						-4209 Jul 04 j 16:40	0°Υ	
conjunction	-4214 Jul 10 j 02:27	13°Π06'11	1°08'05			-4209 Sep 02 j 22:32	0°Ϣ	
minimum elong	-4214 Jul 10 j 01:42	13°Π04'57	1°08'17	asc. node		-4209 Sep 21 j 18:05	5°Ϣ44'13	
	-4214 Aug 04 j 17:31	0°Ϣ		retrograde		-4209 Oct 12 j 12:36	8°Ϣ15'23	
morning rise	-4214 Aug 24 j 21:35	13°Ϣ32'46				-4209 Nov 17 j 17:07	30°ϣΥ	
	-4214 Sep 17 j 22:39	0°Ω		opposition		-4209 Nov 21 j 10:56	28°Υ29'59	2°11'45
	-4214 Oct 30 j 13:39	0°ϣ		greatest brilliancy		-4209 Nov 21 j 08:04	28°Υ32'52	-1.3m
	-4214 Dec 10 j 21:16	0°Ϣ		min. Earth dist.		-4209 Nov 20 j 20:54	28°Υ44'07	0.66911 AU
	-4213 Jan 20 j 09:28	0°ϣ		direct		-4209 Dec 31 j 16:55	18°Υ47'00	
desc. node	-4213 Feb 02 j 13:38	9°ϣ47'32				-4208 Feb 18 j 05:36	0°Ϣ	
	-4213 Mar 01 j 22:11	0°ϣ				-4208 Apr 18 j 07:41	0°Π	
	-4213 Apr 13 j 00:46	0°Ϣ				-4208 Jun 06 j 08:18	0°Ϣ	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 20

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4208 Jul 20 j 17:33	0°♈		asc. node	-4203 May 13 j 14:08	7°♊39'26	
	-4208 Aug 31 j 01:44	0°♉		morning rise	-4203 May 28 j 08:55	17°♊11'12	
desc. node	-4208 Sep 24 j 06:03	18°♉18'42			-4203 Jun 17 j 10:41	0°♊	
evening set	-4208 Oct 08 j 09:04	29°♉12'35			-4203 Aug 04 j 04:13	0°♈	
	-4208 Oct 09 j 09:30	0°♊			-4203 Sep 22 j 01:57	0°♉	
	-4208 Nov 16 j 16:01	0°♋			-4203 Nov 12 j 17:45	0°♈	
					-4202 Jan 16 j 18:09	0°♉	
conjunction	-4208 Dec 11 j 07:41	19°♋24'43	0°-50'-27	retrograde	-4202 Feb 18 j 10:48	5°♉42'40	
minimum elong	-4208 Dec 11 j 04:23	19°♋18'15	0°50'34		-4202 Mar 21 j 19:12	30°♋♈	
	-4208 Dec 24 j 20:08	0°♌		opposition	-4202 Mar 23 j 15:11	29°♈24'50	3°16'00
max. Earth dist.	-4207 Jan 17 j 17:22	18°♌30'16	2.38725 AU	greatest brilliancy	-4202 Mar 25 j 03:45	28°♈55'20	-2.3m
	-4207 Feb 01 j 19:12	0°♍		min. Earth dist.	-4202 Mar 31 j 22:45	26°♈44'45	0.45218 AU
morning rise	-4207 Feb 17 j 01:23	11°♍27'30		direct	-4202 Apr 28 j 21:48	21°♈46'44	
	-4207 Mar 14 j 07:57	0°♎		desc. node	-4202 May 17 j 03:42	23°♈58'56	
	-4207 Apr 26 j 01:27	0°♏			-4202 Jun 04 j 14:37	0°♉	
	-4207 Jun 10 j 12:47	0°♐			-4202 Jul 28 j 12:36	0°♊	
	-4207 Jul 29 j 20:45	0°♑			-4202 Sep 09 j 17:42	0°♋	
asc. node	-4207 Aug 08 j 18:20	5°♑36'22			-4202 Oct 20 j 23:50	0°♌	
	-4207 Sep 26 j 23:18	0°♒			-4202 Dec 01 j 11:17	0°♍	
retrograde	-4207 Nov 15 j 22:32	11°♒58'02			-4201 Jan 13 j 03:45	0°♎	
opposition	-4207 Dec 24 j 21:56	2°♒50'26	4°16'07		-4201 Feb 26 j 10:55	0°♏	
greatest brilliancy	-4207 Dec 25 j 10:55	2°♒37'37	-1.3m	evening set	-4201 Mar 31 j 16:29	21°♏51'09	
min. Earth dist.	-4207 Dec 28 j 03:04	1°♒34'20	0.65496 AU	asc. node	-4201 Mar 31 j 10:21	21°♏41'10	
	-4206 Jan 01 j 04:21	30°♓♑			-4201 Apr 13 j 05:56	0°♐	
direct	-4206 Feb 04 j 01:40	22°♓49'24					
	-4206 Mar 13 j 01:31	0°♒		conjunction	-4201 May 19 j 15:21	23°♐22'40	0°27'05
	-4206 May 13 j 10:05	0°♓		minimum elong	-4201 May 19 j 14:24	23°♐21'08	0°27'08
	-4206 Jun 29 j 10:30	0°♈		max. Earth dist.	-4201 May 23 j 16:48	25°♐58'20	2.66620 AU
	-4206 Aug 10 j 15:05	0°♉			-4201 May 30 j 00:11	0°♑	
desc. node	-4206 Aug 12 j 04:05	1°♉08'21		morning rise	-4201 Jul 04 j 20:34	22°♑51'48	
	-4206 Sep 19 j 05:51	0°♊			-4201 Jul 16 j 00:52	0°♒	
	-4206 Oct 27 j 15:35	0°♋			-4201 Aug 31 j 19:10	0°♓	
	-4206 Dec 04 j 22:59	0°♌			-4201 Oct 17 j 04:34	0°♈	
evening set	-4206 Dec 15 j 19:55	8°♌25'26			-4201 Dec 02 j 14:17	0°♉	
	-4205 Jan 13 j 02:38	0°♍			-4200 Jan 19 j 03:43	0°♊	
					-4200 Mar 12 j 12:00	0°♋	
conjunction	-4205 Feb 16 j 13:35	25°♍27'57	-1°-2'-28	desc. node	-4200 Apr 03 j 05:48	9°♋12'47	
minimum elong	-4205 Feb 16 j 15:25	25°♍31'17	1°02'40	retrograde	-4200 May 05 j 22:18	15°♋28'51	
	-4205 Feb 22 j 20:19	0°♎		min. Earth dist.	-4200 Jun 04 j 05:27	10°♋39'55	0.37722 AU
max. Earth dist.	-4205 Mar 28 j 17:44	23°♎53'19	2.51414 AU	opposition	-4200 Jun 05 j 14:04	10°♋18'09	-4°-29'-40
	-4205 Apr 06 j 15:12	0°♏		greatest brilliancy	-4200 Jun 05 j 05:19	10°♋23'59	-2.9m
morning rise	-4205 Apr 15 j 21:07	6°♏17'23		direct	-4200 Jul 05 j 13:19	5°♋18'22	
	-4205 May 21 j 14:42	0°♐			-4200 Sep 14 j 21:12	0°♌	
asc. node	-4205 Jun 26 j 16:31	23°♐03'43			-4200 Nov 03 j 14:03	0°♍	
	-4205 Jul 07 j 19:23	0°♑			-4200 Dec 20 j 08:12	0°♎	
	-4205 Aug 26 j 17:58	0°♒			-4199 Feb 05 j 00:52	0°♏	
	-4205 Oct 22 j 03:40	0°♓		asc. node	-4199 Feb 15 j 07:28	6°♏33'32	
retrograde	-4205 Dec 26 j 17:26	18°♓41'47			-4199 Mar 24 j 05:48	0°♐	
opposition	-4204 Feb 01 j 13:50	10°♓37'50	5°11'07	evening set	-4199 May 09 j 15:30	29°♐20'35	
greatest brilliancy	-4204 Feb 03 j 04:25	10°♓01'35	-1.6m		-4199 May 10 j 16:23	0°♑	
min. Earth dist.	-4204 Feb 08 j 10:26	8°♓03'44	0.57740 AU	max. Earth dist.	-4199 Jun 15 j 06:52	22°♑40'07	2.66208 AU
direct	-4204 Mar 12 j 21:08	1°♓00'44					
	-4204 May 31 j 20:50	0°♈		conjunction	-4199 Jun 25 j 10:06	29°♑10'31	1°00'50
desc. node	-4204 Jun 29 j 02:25	17°♈45'48		minimum elong	-4199 Jun 25 j 08:57	29°♑08'39	1°00'59
	-4204 Jul 16 j 23:52	0°♉			-4199 Jun 26 j 16:51	0°♒	
	-4204 Aug 27 j 02:14	0°♊		morning rise	-4199 Aug 09 j 17:22	28°♒42'41	
	-4204 Oct 05 j 07:46	0°♋			-4199 Aug 11 j 16:06	0°♓	
	-4204 Nov 13 j 06:54	0°♌			-4199 Sep 25 j 06:37	0°♈	
	-4204 Dec 23 j 01:37	0°♍			-4199 Nov 07 j 12:39	0°♉	
	-4203 Feb 02 j 09:42	0°♎			-4199 Dec 19 j 16:42	0°♊	
evening set	-4203 Feb 12 j 23:27	7°♎27'32			-4198 Jan 30 j 06:46	0°♋	
	-4203 Mar 17 j 16:03	0°♏		desc. node	-4198 Feb 19 j 06:00	14°♋21'22	
					-4198 Mar 13 j 08:27	0°♌	
conjunction	-4203 Apr 08 j 03:43	14°♏25'26	0°-20'-12		-4198 Apr 27 j 17:43	0°♍	
minimum elong	-4203 Apr 08 j 04:39	14°♏26'59	0°20'16	retrograde	-4198 Jul 10 j 14:30	27°♍54'09	
max. Earth dist.	-4203 Apr 28 j 08:55	27°♏45'20	2.61589 AU	min. Earth dist.	-4198 Aug 07 j 20:25	22°♍27'07	0.46584 AU
	-4203 May 01 j 19:21	0°♐		greatest brilliancy	-4198 Aug 13 j 22:44	20°♍19'53	-2.3m

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 21

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

opposition	-4198 Aug 15 j 22:46	19° $\overline{3}$ 37'40	-5°-41'-5	conjunction	-4193 Nov 14 j 22:17	21° $\underline{5}$ 56'30	0°-24'-2
direct	-4198 Sep 17 j 19:15	12° $\overline{3}$ 54'26		minimum elong	-4193 Nov 14 j 20:17	21° $\underline{5}$ 52'35	0°24'06
	-4198 Nov 16 j 14:22	0° \approx			-4193 Nov 25 j 04:13	0° \mathbb{M}	
asc. node	-4197 Jan 03 j 07:04	25° \approx 05'41			-4192 Jan 02 j 09:17	0° $\overline{2}$	
	-4197 Jan 11 j 21:47	0° \mathbb{H}		morning rise	-4192 Jan 21 j 07:03	14° $\overline{2}$ 40'12	
	-4197 Mar 03 j 17:26	0° \mathbb{Y}			-4192 Feb 10 j 08:27	0° $\overline{3}$	
	-4197 Apr 21 j 19:01	0° \mathbb{B}			-4192 Mar 21 j 21:06	0° \approx	
	-4197 Jun 08 j 09:25	0° \mathbb{I}			-4192 May 03 j 16:57	0° \mathbb{H}	
evening set	-4197 Jun 17 j 00:58	5° \mathbb{I} 34'09			-4192 Jun 18 j 16:05	0° \mathbb{Y}	
max. Earth dist.	-4197 Jul 10 j 23:33	21° \mathbb{I} 12'15	2.60507 AU		-4192 Aug 08 j 23:09	0° \mathbb{B}	
	-4197 Jul 24 j 05:09	0° $\overline{3}$		asc. node	-4192 Aug 25 j 09:36	8° \mathbb{B} 26'11	
				retrograde	-4192 Nov 01 j 20:29	28° \mathbb{B} 56'40	
conjunction	-4197 Aug 03 j 06:15	6° $\overline{3}$ 45'10	1°10'43	opposition	-4192 Dec 11 j 07:59	19° \mathbb{B} 31'26	3°34'13
minimum elong	-4197 Aug 03 j 06:34	6° $\overline{3}$ 45'42	1°10'55	greatest brilliancy	-4192 Dec 11 j 12:49	19° \mathbb{B} 26'36	-1.3m
	-4197 Sep 06 j 01:38	0° \mathbb{Q}		min. Earth dist.	-4192 Dec 13 j 01:08	18° \mathbb{B} 50'25	0.66828 AU
morning rise	-4197 Sep 20 j 01:16	9° \mathbb{Q} 51'20		direct	-4191 Jan 21 j 07:22	9° \mathbb{B} 33'47	
	-4197 Oct 18 j 01:13	0° \mathbb{M}			-4191 Mar 30 j 21:41	0° \mathbb{I}	
	-4197 Nov 27 j 12:49	0° $\underline{5}$			-4191 May 23 j 06:44	0° $\overline{3}$	
	-4196 Jan 06 j 01:45	0° \mathbb{M}			-4191 Jul 07 j 20:50	0° \mathbb{Q}	
desc. node	-4196 Jan 07 j 05:04	0° \mathbb{M} 52'08			-4191 Aug 18 j 14:13	0° \mathbb{M}	
	-4196 Feb 14 j 10:30	0° $\overline{2}$		desc. node	-4191 Aug 28 j 21:46	7° \mathbb{M} 43'02	
	-4196 Mar 25 j 16:25	0° $\overline{3}$			-4191 Sep 27 j 00:37	0° $\underline{5}$	
	-4196 May 07 j 12:49	0° \approx			-4191 Nov 04 j 07:48	0° \mathbb{M}	
	-4196 Jun 26 j 17:38	0° \mathbb{H}		evening set	-4191 Nov 18 j 19:44	11° \mathbb{M} 24'59	
retrograde	-4196 Aug 23 j 11:34	17° \mathbb{H} 25'35			-4191 Dec 12 j 12:40	0° $\overline{2}$	
min. Earth dist.	-4196 Sep 26 j 03:55	9° \mathbb{H} 50'55	0.58526 AU		-4190 Jan 20 j 13:22	0° $\overline{3}$	
opposition	-4196 Oct 01 j 20:11	7° \mathbb{H} 36'21	-2°-3'-28				
greatest brilliancy	-4196 Oct 01 j 06:23	7° \mathbb{H} 49'58	-1.7m	conjunction	-4190 Jan 23 j 01:42	1° $\overline{3}$ 53'49	-1°-7'-56
	-4196 Oct 27 j 04:31	30° \mathbb{R} \approx		minimum elong	-4190 Jan 23 j 01:42	1° $\overline{3}$ 53'49	1°08'08
direct	-4196 Nov 07 j 15:23	29° \approx 07'25			-4190 Mar 02 j 03:49	0° \approx	
	-4196 Nov 19 j 17:15	0° \mathbb{H}		max. Earth dist.	-4190 Mar 11 j 05:22	6° \approx 30'10	2.46359 AU
asc. node	-4196 Nov 20 j 07:24	0° \mathbb{H} 05'04		morning rise	-4190 Mar 26 j 15:21	17° \approx 23'45	
	-4195 Feb 05 j 12:27	0° \mathbb{Y}			-4190 Apr 13 j 20:28	0° \mathbb{H}	
	-4195 Mar 31 j 03:41	0° \mathbb{B}			-4190 May 28 j 21:40	0° \mathbb{Y}	
	-4195 May 19 j 09:00	0° \mathbb{I}		asc. node	-4190 Jul 13 j 08:36	28° \mathbb{Y} 37'32	
	-4195 Jul 04 j 15:22	0° $\overline{3}$			-4190 Jul 15 j 14:42	0° \mathbb{B}	
evening set	-4195 Jul 27 j 09:03	15° $\overline{3}$ 24'46			-4190 Sep 05 j 10:12	0° \mathbb{I}	
max. Earth dist.	-4195 Aug 12 j 02:16	26° $\overline{3}$ 20'03	2.50125 AU		-4190 Nov 13 j 02:22	0° $\overline{3}$	
	-4195 Aug 17 j 07:10	0° \mathbb{Q}		retrograde	-4190 Dec 09 j 18:48	3° $\overline{3}$ 51'23	
					-4189 Jan 03 j 08:27	30° \mathbb{R} \mathbb{I}	
conjunction	-4195 Sep 16 j 13:18	21° \mathbb{Q} 46'46	0°44'09	opposition	-4189 Jan 16 j 15:07	25° \mathbb{I} 18'26	5°01'03
minimum elong	-4195 Sep 16 j 15:14	21° \mathbb{Q} 50'17	0°44'15	greatest brilliancy	-4189 Jan 17 j 19:36	24° \mathbb{I} 50'59	-1.5m
	-4195 Sep 27 j 16:54	0° \mathbb{M}		min. Earth dist.	-4189 Jan 22 j 02:51	23° \mathbb{I} 11'45	0.61529 AU
	-4195 Nov 06 j 09:51	0° $\underline{5}$		direct	-4189 Feb 26 j 13:08	15° \mathbb{I} 24'36	
morning rise	-4195 Nov 11 j 09:41	3° $\underline{5}$ 50'22			-4189 Apr 21 j 16:38	0° $\overline{3}$	
desc. node	-4195 Nov 24 j 03:03	13° $\underline{5}$ 40'19			-4189 Jun 13 j 20:59	0° \mathbb{Q}	
	-4195 Dec 15 j 02:51	0° \mathbb{M}		desc. node	-4189 Jul 16 j 21:07	22° \mathbb{Q} 17'45	
	-4194 Jan 22 j 15:29	0° $\overline{2}$			-4189 Jul 27 j 16:12	0° \mathbb{M}	
	-4194 Mar 02 j 21:10	0° $\overline{3}$			-4189 Sep 05 j 22:40	0° $\underline{5}$	
	-4194 Apr 12 j 19:37	0° \approx			-4189 Oct 14 j 17:10	0° \mathbb{M}	
	-4194 May 26 j 18:36	0° \mathbb{H}			-4189 Nov 22 j 07:34	0° $\overline{2}$	
	-4194 Jul 15 j 18:43	0° \mathbb{Y}			-4189 Dec 31 j 18:14	0° $\overline{3}$	
retrograde	-4194 Sep 29 j 01:28	25° \mathbb{Y} 06'46		evening set	-4188 Jan 23 j 11:30	16° $\overline{3}$ 47'00	
asc. node	-4194 Oct 08 j 08:26	24° \mathbb{Y} 31'26			-4188 Feb 10 j 18:43	0° \approx	
min. Earth dist.	-4194 Nov 06 j 00:52	16° \mathbb{Y} 02'28	0.65741 AU				
opposition	-4194 Nov 08 j 02:12	15° \mathbb{Y} 12'45	1°09'58	conjunction	-4188 Mar 20 j 18:27	27° \approx 15'30	0°-38'-57
greatest brilliancy	-4194 Nov 07 j 22:31	15° \mathbb{Y} 16'28	-1.3m	minimum elong	-4188 Mar 20 j 20:15	27° \approx 18'34	0°39'03
direct	-4194 Dec 17 j 15:05	5° \mathbb{Y} 44'25			-4188 Mar 24 j 18:51	0° \mathbb{H}	
	-4193 Mar 05 j 02:32	0° \mathbb{B}		max. Earth dist.	-4188 Apr 17 j 11:10	15° \mathbb{H} 56'39	2.58175 AU
	-4193 Apr 28 j 09:21	0° \mathbb{I}			-4188 May 08 j 18:50	0° \mathbb{Y}	
	-4193 Jun 15 j 04:13	0° $\overline{3}$		morning rise	-4188 May 12 j 14:00	2° \mathbb{Y} 28'39	
	-4193 Jul 29 j 04:44	0° \mathbb{Q}		asc. node	-4188 May 30 j 05:21	13° \mathbb{Y} 53'11	
	-4193 Sep 08 j 11:15	0° \mathbb{M}			-4188 Jun 24 j 12:35	0° \mathbb{B}	
evening set	-4193 Sep 15 j 17:08	5° \mathbb{M} 25'53			-4188 Aug 11 j 19:48	0° \mathbb{I}	
desc. node	-4193 Oct 11 j 23:35	25° \mathbb{M} 28'17			-4188 Oct 01 j 10:03	0° $\overline{3}$	
	-4193 Oct 17 j 20:07	0° $\underline{5}$			-4188 Nov 28 j 01:57	0° \mathbb{Q}	
max. Earth dist.	-4193 Oct 22 j 15:46	3° $\underline{5}$ 44'31	2.38388 AU	retrograde	-4187 Jan 25 j 14:03	15° \mathbb{Q} 37'20	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 22

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

opposition	-4187 Mar 01 j 10:56	8°♊31'40	4°34'47	asc. node	-4182 Jan 19 j 22:24	28°≈52'16	
greatest brilliancy	-4187 Mar 03 j 09:01	7°♊51'21	-2.0m		-4182 Jan 21 j 19:01	0°♋	
min. Earth dist.	-4187 Mar 09 j 20:38	5°♊36'32	0.50417 AU		-4182 Mar 11 j 17:19	0°♌	
	-4187 Apr 04 j 02:10	30°♋♌			-4182 Apr 28 j 23:43	0°♍	
direct	-4187 Apr 08 j 20:23	29°♌50'40		evening set	-4182 Jun 02 j 00:32	21°♎30'22	
	-4187 Apr 13 j 15:51	0°♏			-4182 Jun 15 j 06:51	0°♐	
desc. node	-4187 Jun 02 j 20:23	16°♏13'07		max. Earth dist.	-4182 Jun 30 j 11:54	9°♑50'20	2.63341 AU
	-4187 Jun 27 j 02:34	0°♒					
	-4187 Aug 10 j 16:47	0°♓		conjunction	-4182 Jul 18 j 17:45	21°♒47'20	1°10'25
	-4187 Sep 20 j 11:20	0°♈		minimum elong	-4182 Jul 18 j 17:20	21°♒46'39	1°10'36
	-4187 Oct 30 j 10:17	0°♉			-4182 Jul 31 j 02:43	0°♊	
	-4187 Dec 09 j 23:54	0°♋		morning rise	-4182 Sep 03 j 01:32	22°♌59'47	
	-4186 Jan 20 j 23:38	0°≈			-4182 Sep 13 j 04:46	0°♏	
	-4186 Mar 05 j 18:15	0°♋			-4182 Oct 25 j 13:58	0°♐	
evening set	-4186 Mar 14 j 15:34	5°♋56'52			-4182 Dec 05 j 13:51	0°♓	
asc. node	-4186 Apr 17 j 02:52	27°♋59'19			-4181 Jan 14 j 16:33	0°♈	
	-4186 Apr 20 j 05:04	0°♌		desc. node	-4181 Jan 23 j 22:23	6°♈57'06	
					-4181 Feb 23 j 16:45	0°♉	
conjunction	-4186 May 04 j 05:59	9°♌05'25	0°09'44		-4181 Apr 05 j 21:22	0°♋	
minimum elong	-4186 May 04 j 05:35	9°♌04'47	0°09'46		-4181 May 21 j 00:40	0°≈	
behind sun begin	-4186 May 03 j 13:26	8°♌38'44			-4181 Aug 01 j 05:30	0°♋	
behind sun end	-4186 May 04 j 21:44	9°♌30'49		retrograde	-4181 Aug 08 j 12:13	0°♋22'24	
max. Earth dist.	-4186 May 14 j 05:16	15°♌30'44	2.65286 AU		-4181 Aug 15 j 15:16	30°♋≈	
	-4186 Jun 05 j 20:26	0°♌		min. Earth dist.	-4181 Sep 09 j 03:46	23°≈33'27	0.54224 AU
morning rise	-4186 Jun 20 j 15:26	9°♌25'29		greatest brilliancy	-4181 Sep 14 j 22:32	21°≈20'17	-1.9m
	-4186 Jul 23 j 01:06	0°♍		opposition	-4181 Sep 16 j 02:03	20°≈53'48	-3°-30'-2
	-4186 Sep 08 j 09:42	0°♎		direct	-4181 Oct 21 j 10:56	12°≈59'38	
	-4186 Oct 26 j 02:42	0°♏		asc. node	-4181 Dec 07 j 22:11	24°≈10'47	
	-4186 Dec 14 j 07:51	0°♐			-4181 Dec 21 j 10:24	0°♋	
	-4185 Feb 07 j 21:20	0°♑			-4180 Feb 17 j 00:47	0°♌	
retrograde	-4185 Apr 04 j 22:47	15°♑25'26			-4180 Apr 08 j 05:40	0°♍	
desc. node	-4185 Apr 20 j 21:23	13°♑52'52			-4180 May 26 j 15:41	0°♎	
opposition	-4185 May 05 j 17:29	10°♑15'59	-1°-5'-33	evening set	-4180 Jul 10 j 14:22	29°♎16'36	
greatest brilliancy	-4185 May 05 j 22:27	10°♑12'33	-2.8m		-4180 Jul 11 j 16:21	0°♏	
min. Earth dist.	-4185 May 09 j 15:45	9°♑11'09	0.38821 AU	max. Earth dist.	-4180 Jul 28 j 15:09	11°♏27'08	2.54652 AU
direct	-4185 Jun 06 j 11:30	4°♑38'30			-4180 Aug 24 j 09:00	0°♏	
	-4185 Aug 16 j 05:08	0°♒					
	-4185 Oct 02 j 14:29	0°♓		conjunction	-4180 Aug 28 j 16:48	3°♏03'18	0°59'42
	-4185 Nov 16 j 00:39	0°♈		minimum elong	-4180 Aug 28 j 18:21	3°♏06'03	0°59'52
	-4185 Dec 30 j 12:17	0°≈			-4180 Oct 04 j 23:02	0°♐	
	-4184 Feb 13 j 23:15	0°♋		morning rise	-4180 Oct 19 j 13:33	10°♐50'48	
asc. node	-4184 Mar 04 j 00:20	12°♋21'31			-4180 Nov 13 j 21:55	0°♑	
	-4184 Mar 31 j 11:18	0°♌		desc. node	-4180 Dec 10 j 20:37	20°♑41'57	
evening set	-4184 Apr 24 j 12:32	15°♌20'27			-4180 Dec 22 j 21:06	0°♒	
	-4184 May 17 j 13:31	0°♍			-4179 Jan 30 j 15:23	0°♓	
max. Earth dist.	-4184 Jun 06 j 05:25	12°♍31'29	2.67004 AU		-4179 Mar 11 j 03:02	0°♈	
					-4179 Apr 21 j 11:29	0°≈	
conjunction	-4184 Jun 10 j 20:21	15°♍28'30	0°50'00		-4179 Jun 05 j 13:40	0°♋	
minimum elong	-4184 Jun 10 j 19:03	15°♍26'26	0°50'07		-4179 Jul 31 j 00:04	0°♌	
	-4184 Jul 03 j 12:30	0°♍		retrograde	-4179 Sep 15 j 08:15	11°♌25'06	
morning rise	-4184 Jul 26 j 04:03	14°♍37'44		min. Earth dist.	-4179 Oct 21 j 18:47	2°♌52'09	0.63621 AU
	-4184 Aug 18 j 17:11	0°♎		asc. node	-4179 Oct 24 j 23:08	1°♌35'25	
	-4184 Oct 02 j 20:34	0°♏		opposition	-4179 Oct 25 j 07:10	1°♌27'21	0°00'48
	-4184 Nov 15 j 23:37	0°♐		greatest brilliancy	-4179 Nov 10 j 08:39	25°♋39'27	-1.5m
	-4184 Dec 29 j 10:11	0°♑			-4179 Oct 28 j 23:00	30°♋♌	
	-4183 Feb 10 j 20:53	0°♒		direct	-4179 Dec 02 j 22:21	22°♋18'14	
desc. node	-4183 Mar 07 j 23:27	16°♒53'32			-4178 Jan 10 j 23:12	0°♌	
	-4183 Mar 28 j 09:32	0°♓			-4178 Mar 16 j 03:05	0°♍	
	-4183 May 29 j 08:21	0°♈			-4178 May 06 j 15:52	0°♎	
retrograde	-4183 Jun 18 j 08:21	2°♈42'14			-4178 Jun 22 j 16:27	0°♏	
	-4183 Jul 08 j 04:01	30°♋♌			-4178 Aug 05 j 12:16	0°♏	
min. Earth dist.	-4183 Jul 15 j 01:36	28°♌20'20	0.41833 AU	evening set	-4178 Aug 25 j 11:29	14°♏18'29	
greatest brilliancy	-4183 Jul 20 j 10:42	26°♌21'37	-2.6m	max. Earth dist.	-4178 Sep 12 j 14:38	27°♏37'33	2.42512 AU
opposition	-4183 Jul 22 j 11:42	25°♌43'03	-6°-28'-6		-4178 Sep 15 j 19:14	0°♐	
direct	-4183 Aug 22 j 12:51	19°♌54'19					
	-4183 Oct 04 j 18:25	0°♈		conjunction	-4178 Oct 20 j 14:19	26°♐23'47	0°05'53
	-4183 Dec 02 j 08:55	0°≈		minimum elong	-4178 Oct 20 j 14:45	26°♐24'37	0°05'55

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 23

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

behind sun begin	-4178 Oct 19 j 14:51	25° \mathbb{M} 38'38		retrograde	-4172 Jan 06 j 04:12	28° \mathfrak{G} 12'17	
behind sun end	-4178 Oct 21 j 14:38	27° \mathbb{M} 10'37		opposition	-4172 Feb 11 j 09:46	20° \mathfrak{G} 26'45	5°06'32
	-4178 Oct 25 j 06:25	0° $\underline{\mathfrak{A}}$		greatest brilliancy	-4172 Feb 13 j 04:43	19° \mathfrak{G} 47'12	-1.8m
desc. node	-4178 Oct 28 j 18:58	2° $\underline{\mathfrak{A}}$ 43'33		min. Earth dist.	-4172 Feb 18 j 22:41	17° \mathfrak{G} 41'00	0.55326 AU
	-4178 Dec 02 j 17:01	0° \mathbb{M}		direct	-4172 Mar 22 j 04:45	11° \mathfrak{G} 04'32	
morning rise	-4178 Dec 23 j 06:31	16° \mathbb{M} 08'31			-4172 May 22 j 07:36	0° Ω	
	-4177 Jan 09 j 23:47	0° \mathfrak{A}		desc. node	-4172 Jun 19 j 13:13	16° Ω 23'51	
	-4177 Feb 17 j 23:54	0° \mathfrak{Z}			-4172 Jul 10 j 07:10	0° \mathbb{M}	
	-4177 Mar 30 j 13:59	0° \approx			-4172 Aug 21 j 05:25	0° $\underline{\mathfrak{A}}$	
	-4177 May 12 j 15:13	0° \mathfrak{H}			-4172 Sep 29 j 20:36	0° \mathbb{M}	
	-4177 Jun 28 j 10:56	0° \mathbb{Y}			-4172 Nov 08 j 01:50	0° \mathfrak{A}	
	-4177 Aug 22 j 15:14	0° \mathfrak{B}			-4172 Dec 18 j 01:25	0° \mathfrak{Z}	
asc. node	-4177 Sep 11 j 23:41	8° \mathfrak{B} 24'58			-4171 Jan 28 j 13:31	0° \approx	
retrograde	-4177 Oct 20 j 06:15	16° \mathfrak{B} 07'02		evening set	-4171 Feb 24 j 05:42	18° \approx 35'58	
opposition	-4177 Nov 29 j 02:05	6° \mathfrak{B} 27'47	2°44'21		-4171 Mar 12 j 22:52	0° \mathfrak{H}	
greatest brilliancy	-4177 Nov 29 j 01:09	6° \mathfrak{B} 28'43	-1.3m				
min. Earth dist.	-4177 Nov 29 j 07:29	6° \mathfrak{B} 22'22	0.67163 AU	conjunction	-4171 Apr 17 j 23:33	23° \mathfrak{H} 59'35	0°-9'-5
	-4177 Dec 16 j 21:56	30° \mathfrak{R} \mathbb{Y}		minimum elong	-4171 Apr 17 j 23:57	24° \mathfrak{H} 00'15	0°09'07
direct	-4176 Jan 08 j 15:51	26° \mathbb{Y} 38'29		behind sun begin	-4171 Apr 17 j 06:31	23° \mathfrak{H} 31'39	
	-4176 Feb 02 j 10:37	0° \mathfrak{B}		behind sun end	-4171 Apr 18 j 17:24	24° \mathfrak{H} 28'51	
	-4176 Apr 11 j 19:00	0° \mathbb{I}			-4171 Apr 27 j 03:51	0° \mathbb{Y}	
	-4176 Jun 01 j 00:19	0° \mathfrak{G}		asc. node	-4171 May 03 j 19:07	4° \mathbb{Y} 19'13	
	-4176 Jul 15 j 19:04	0° Ω		max. Earth dist.	-4171 May 04 j 08:40	4° \mathbb{Y} 41'12	2.63136 AU
	-4176 Aug 26 j 06:37	0° \mathbb{M}		morning rise	-4171 Jun 06 j 00:56	25° \mathbb{Y} 43'01	
desc. node	-4176 Sep 14 j 16:02	14° \mathbb{M} 37'24			-4171 Jun 12 j 18:10	0° \mathfrak{B}	
	-4176 Oct 04 j 15:34	0° $\underline{\mathfrak{A}}$			-4171 Jul 30 j 05:37	0° \mathbb{I}	
evening set	-4176 Oct 22 j 18:49	14° $\underline{\mathfrak{A}}$ 09'16			-4171 Sep 16 j 10:53	0° \mathfrak{G}	
	-4176 Nov 11 j 22:19	0° \mathbb{M}			-4171 Nov 05 j 05:44	0° Ω	
	-4176 Dec 20 j 02:14	0° \mathfrak{A}			-4171 Dec 30 j 13:06	0° \mathbb{M}	
				retrograde	-4170 Mar 05 j 19:41	19° \mathbb{M} 07'26	
conjunction	-4176 Dec 27 j 00:18	5° \mathfrak{A} 23'31	-1°00'-45	opposition	-4170 Apr 06 j 22:55	13° \mathbb{M} 17'13	2°01'05
minimum elong	-4176 Dec 26 j 21:39	5° \mathfrak{A} 18'23	1°00'55	greatest brilliancy	-4170 Apr 07 j 21:19	13° \mathbb{M} 00'06	-2.5m
	-4175 Jan 28 j 01:04	0° \mathfrak{Z}		min. Earth dist.	-4170 Apr 14 j 09:10	11° \mathbb{M} 01'23	0.42547 AU
max. Earth dist.	-4175 Feb 12 j 17:05	11° \mathfrak{Z} 46'06	2.41149 AU	desc. node	-4170 May 07 j 13:51	6° \mathbb{M} 29'03	
morning rise	-4175 Mar 03 j 11:57	25° \mathfrak{Z} 36'22		direct	-4170 May 11 j 18:27	6° \mathbb{M} 21'46	
	-4175 Mar 09 j 13:15	0° \approx			-4170 Jul 17 j 17:39	0° $\underline{\mathfrak{A}}$	
	-4175 Apr 21 j 04:45	0° \mathfrak{H}			-4170 Sep 02 j 02:20	0° \mathbb{M}	
	-4175 Jun 05 j 10:09	0° \mathbb{Y}			-4170 Oct 14 j 14:31	0° \mathfrak{A}	
	-4175 Jul 23 j 22:58	0° \mathfrak{B}			-4170 Nov 25 j 19:10	0° \mathfrak{Z}	
asc. node	-4175 Jul 29 j 23:21	3° \mathfrak{B} 31'48			-4169 Jan 07 j 23:01	0° \approx	
	-4175 Sep 17 j 04:05	0° \mathbb{I}			-4169 Feb 21 j 13:39	0° \mathfrak{H}	
retrograde	-4175 Nov 24 j 08:09	20° \mathbb{I} 02'43		asc. node	-4169 Mar 21 j 16:02	18° \mathfrak{H} 25'13	
opposition	-4174 Jan 01 j 23:10	11° \mathbb{I} 06'08	4°35'53		-4169 Apr 08 j 13:22	0° \mathbb{Y}	
greatest brilliancy	-4174 Jan 02 j 17:24	10° \mathbb{I} 48'16	-1.4m	evening set	-4169 Apr 09 j 22:23	0° \mathbb{Y} 53'12	
min. Earth dist.	-4174 Jan 05 j 23:55	9° \mathbb{I} 31'25	0.64354 AU		-4169 May 25 j 09:44	0° \mathfrak{B}	
direct	-4174 Feb 12 j 02:50	1° \mathbb{I} 05'38					
	-4174 May 06 j 05:33	0° \mathfrak{G}		conjunction	-4169 May 28 j 04:32	1° \mathfrak{B} 46'31	0°36'14
	-4174 Jun 23 j 17:37	0° Ω		minimum elong	-4169 May 28 j 03:22	1° \mathfrak{B} 44'40	0°36'18
desc. node	-4174 Aug 02 j 13:35	27° Ω 56'03		max. Earth dist.	-4169 May 29 j 02:32	2° \mathfrak{B} 21'35	2.66990 AU
	-4174 Aug 05 j 09:23	0° \mathbb{M}			-4169 Jul 11 j 09:14	0° \mathbb{I}	
	-4174 Sep 14 j 04:58	0° $\underline{\mathfrak{A}}$		morning rise	-4169 Jul 12 j 23:06	1° \mathbb{I} 00'38	
	-4174 Oct 22 j 17:17	0° \mathbb{M}			-4169 Aug 26 j 21:57	0° \mathfrak{G}	
	-4174 Nov 30 j 02:28	0° \mathfrak{A}			-4169 Oct 11 j 18:41	0° Ω	
evening set	-4174 Dec 30 j 10:09	23° \mathfrak{A} 16'47			-4169 Nov 26 j 04:07	0° \mathbb{M}	
	-4173 Jan 08 j 07:48	0° \mathfrak{Z}			-4168 Jan 10 j 17:24	0° $\underline{\mathfrak{A}}$	
	-4173 Feb 18 j 02:57	0° \approx			-4168 Feb 27 j 05:28	0° \mathbb{M}	
				desc. node	-4168 Mar 24 j 14:56	14° \mathbb{M} 55'24	
conjunction	-4173 Mar 01 j 06:09	7° \approx 56'46	0°-55'-22		-4168 Apr 29 j 12:57	0° \mathfrak{A}	
minimum elong	-4173 Mar 01 j 08:18	8° \approx 00'36	0°55'32	retrograde	-4168 May 22 j 19:03	3° \mathfrak{A} 28'20	
	-4173 Apr 01 j 22:28	0° \mathfrak{H}			-4168 Jun 15 j 13:31	30° \mathfrak{R} \mathbb{M}	
max. Earth dist.	-4173 Apr 05 j 23:53	2° \mathfrak{H} 46'06	2.54001 AU	min. Earth dist.	-4168 Jun 19 j 07:31	28° \mathbb{M} 59'20	0.38491 AU
morning rise	-4173 Apr 26 j 10:06	16° \mathfrak{H} 31'13		greatest brilliancy	-4168 Jun 22 j 09:19	28° \mathbb{M} 07'51	-2.8m
	-4173 May 16 j 20:48	0° \mathbb{Y}		opposition	-4168 Jun 23 j 12:29	27° \mathbb{M} 48'50	-5°-48'-40
asc. node	-4173 Jun 16 j 22:10	19° \mathbb{Y} 59'14		direct	-4168 Jul 23 j 10:38	22° \mathbb{M} 42'39	
	-4173 Jul 02 j 19:35	0° \mathfrak{B}			-4168 Aug 27 j 21:11	0° \mathfrak{A}	
	-4173 Aug 20 j 23:39	0° \mathbb{I}			-4168 Oct 25 j 23:15	0° \mathfrak{Z}	
	-4173 Oct 13 j 10:51	0° \mathfrak{G}			-4168 Dec 13 j 22:59	0° \approx	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 24

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4167 Jan 30 j 14:54	0° H		morning rise	-4163 Nov 25 j 16:18	18° L 36'34	
asc. node	-4167 Feb 05 j 13:55	3° H 45'09			-4163 Dec 10 j 06:34	0° M	
	-4167 Mar 19 j 07:44	0° Y			-4162 Jan 17 j 16:45	0° J	
	-4167 May 06 j 00:19	0° B			-4162 Feb 25 j 19:37	0° Z	
evening set	-4167 May 18 j 03:58	7° B 41'16			-4162 Apr 07 j 13:36	0° \approx	
max. Earth dist.	-4167 Jun 20 j 18:56	29° B 08'40	2.65423 AU		-4162 May 21 j 01:12	0° H	
	-4167 Jun 22 j 02:51	0° II			-4162 Jul 08 j 09:52	0° Y	
					-4162 Sep 13 j 13:13	0° B	
conjunction	-4167 Jul 03 j 19:07	7° II 32'33	1°05'30	asc. node	-4162 Sep 28 j 14:43	2° B 43'40	
minimum elong	-4167 Jul 03 j 18:10	7° II 31'01	1°05'40	retrograde	-4162 Oct 06 j 19:25	3° B 09'09	
	-4167 Aug 07 j 01:02	0° S			-4162 Oct 28 j 10:28	30° R Y	
morning rise	-4167 Aug 18 j 07:13	7° S 30'20		opposition	-4162 Nov 15 j 19:44	23° Y 19'19	1°46'54
	-4167 Sep 20 j 10:59	0° Q		min. Earth dist.	-4162 Nov 14 j 13:27	23° Y 49'48	0.66508 AU
	-4167 Nov 02 j 09:00	0° M		greatest brilliancy	-4162 Nov 15 j 15:56	23° Y 23'08	-1.3m
	-4167 Dec 14 j 01:24	0° L		direct	-4162 Dec 25 j 19:10	13° Y 42'27	
	-4166 Jan 23 j 23:50	0° M			-4161 Feb 24 j 08:33	0° B	
desc. node	-4166 Feb 09 j 16:30	12° M 15'43			-4161 Apr 22 j 13:59	0° II	
	-4166 Mar 06 j 01:17	0° J			-4161 Jun 10 j 02:41	0° S	
	-4166 Apr 18 j 03:24	0° Z			-4161 Jul 24 j 09:32	0° Q	
	-4166 Jun 09 j 05:24	0° \approx			-4161 Sep 03 j 18:04	0° M	
retrograde	-4166 Jul 21 j 19:20	10° \approx 54'10		evening set	-4161 Sep 28 j 18:01	18° M 54'59	
min. Earth dist.	-4166 Aug 20 j 06:27	4° \approx 56'51	0.49376 AU	desc. node	-4161 Oct 02 j 09:41	21° M 43'17	
greatest brilliancy	-4166 Aug 26 j 09:10	2° \approx 43'14	-2.1m		-4161 Oct 13 j 02:55	0° L	
opposition	-4166 Aug 28 j 03:07	2° \approx 04'45	-4°-56'-49		-4161 Nov 20 j 10:20	0° M	
	-4166 Sep 03 j 00:05	30° R Z					
direct	-4166 Sep 30 j 21:39	24° Z 53'36		conjunction	-4161 Nov 30 j 04:23	7° M 40'59	0°-39'-57
	-4166 Oct 30 j 23:19	0° \approx		minimum elong	-4161 Nov 30 j 01:19	7° M 34'59	0°40'03
asc. node	-4166 Dec 24 j 12:41	24° \approx 03'25		max. Earth dist.	-4161 Dec 10 j 02:29	15° M 29'39	2.37624 AU
	-4165 Jan 04 j 15:10	0° H			-4161 Dec 28 j 14:27	0° J	
	-4165 Feb 26 j 03:22	0° Y			-4160 Feb 05 j 12:41	0° Z	
	-4165 Apr 16 j 20:21	0° B		morning rise	-4160 Feb 06 j 05:55	0° Z 32'39	
	-4165 Jun 03 j 17:06	0° II			-4160 Mar 17 j 00:11	0° \approx	
evening set	-4165 Jun 25 j 19:21	14° II 16'15			-4160 Apr 28 j 16:53	0° H	
max. Earth dist.	-4165 Jul 17 j 10:35	28° II 32'46	2.58628 AU		-4160 Jun 13 j 06:52	0° Y	
	-4165 Jul 19 j 14:49	0° S			-4160 Aug 02 j 04:59	0° B	
				asc. node	-4160 Aug 15 j 15:30	7° B 22'25	
conjunction	-4165 Aug 12 j 12:14	16° S 10'59	1°08'26		-4160 Oct 04 j 15:47	0° II	
minimum elong	-4165 Aug 12 j 13:00	16° S 12'18	1°08'37	retrograde	-4160 Nov 09 j 20:55	6° II 49'53	
	-4165 Sep 01 j 10:17	0° Q			-4160 Dec 12 j 20:16	30° R B	
morning rise	-4165 Sep 30 j 11:02	20° Q 40'20		opposition	-4160 Dec 19 j 02:26	27° B 33'50	3°59'31
	-4165 Oct 13 j 06:48	0° M		greatest brilliancy	-4160 Dec 19 j 11:31	27° B 24'50	-1.3m
	-4165 Nov 22 j 13:52	0° L		min. Earth dist.	-4160 Dec 21 j 15:10	26° B 33'39	0.66217 AU
desc. node	-4165 Dec 28 j 15:14	27° L 29'35		direct	-4159 Jan 29 j 05:07	17° B 33'51	
	-4165 Dec 31 j 21:37	0° M			-4159 Mar 20 j 23:50	0° II	
	-4164 Feb 09 j 00:07	0° J			-4159 May 17 j 03:12	0° S	
	-4164 Mar 19 j 21:11	0° Z			-4159 Jul 02 j 13:16	0° Q	
	-4164 Apr 30 j 23:09	0° \approx			-4159 Aug 13 j 14:00	0° M	
	-4164 Jun 17 j 07:58	0° H		desc. node	-4159 Aug 19 j 07:38	4° M 15'36	
retrograde	-4164 Sep 01 j 01:37	26° H 49'13			-4159 Sep 22 j 03:30	0° L	
min. Earth dist.	-4164 Oct 05 j 18:33	18° H 52'38	0.60566 AU		-4159 Oct 30 j 12:18	0° M	
opposition	-4164 Oct 10 j 17:23	16° H 54'18	-1°-15'-47	evening set	-4159 Dec 04 j 03:41	27° M 11'31	
greatest brilliancy	-4164 Oct 10 j 09:51	17° H 01'48	-1.6m		-4159 Dec 07 j 18:05	0° J	
asc. node	-4164 Nov 10 j 12:46	8° H 27'01			-4158 Jan 15 j 19:25	0° Z	
direct	-4164 Nov 17 j 05:55	8° H 09'26					
	-4163 Jan 28 j 10:53	0° Y		conjunction	-4158 Feb 06 j 05:54	16° Z 00'08	-1°-6'-4
	-4163 Mar 25 j 11:20	0° B		minimum elong	-4158 Feb 06 j 07:09	16° Z 02'28	1°06'15
	-4163 May 14 j 09:33	0° II			-4158 Feb 25 j 10:27	0° \approx	
	-4163 Jun 29 j 22:16	0° S		max. Earth dist.	-4158 Mar 22 j 00:05	17° \approx 27'28	2.49195 AU
evening set	-4163 Aug 06 j 11:43	25° S 39'38		morning rise	-4158 Apr 07 j 10:40	28° \approx 51'17	
	-4163 Aug 12 j 15:47	0° Q			-4158 Apr 09 j 02:45	0° H	
max. Earth dist.	-4163 Aug 21 j 18:46	6° Q 29'03	2.47433 AU		-4158 May 24 j 01:29	0° Y	
	-4163 Sep 23 j 00:50	0° M		asc. node	-4158 Jul 03 j 13:44	25° Y 46'40	
					-4158 Jul 10 j 09:26	0° B	
conjunction	-4163 Sep 28 j 03:55	3° M 49'13	0°32'03		-4158 Aug 29 j 22:38	0° II	
minimum elong	-4163 Sep 28 j 05:40	3° M 52'30	0°32'06		-4158 Oct 28 j 09:13	0° S	
	-4163 Nov 01 j 15:50	0° L		retrograde	-4158 Dec 19 j 05:32	12° S 37'39	
desc. node	-4163 Nov 14 j 12:19	9° L 55'44		opposition	-4157 Jan 25 j 13:44	4° S 19'56	5°08'42

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 25

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

greatest brilliancy	-4157 Jan 26 j 23:55	3° \mathfrak{D} 47'25	-1.6m			-4152 Mar 26 j 15:50	0° Υ	
min. Earth dist.	-4157 Jan 31 j 20:10	1° \mathfrak{D} 57'18	0.59539 AU	evening set		-4152 May 03 j 06:05	23° Υ 51'39	
	-4157 Feb 06 j 06:00	30° \mathfrak{R} II				-4152 May 12 j 22:20	0° \mathfrak{B}	
direct	-4157 Mar 07 j 04:51	24° \mathfrak{II} 34'05		max. Earth dist.		-4152 Jun 11 j 14:12	18° \mathfrak{B} 53'01	2.66675 AU
	-4157 Apr 07 j 00:59	0° \mathfrak{D}						
	-4157 Jun 06 j 17:58	0° \mathfrak{Q}		conjunction		-4152 Jun 19 j 05:07	23° \mathfrak{B} 45'39	0°56'41
desc. node	-4157 Jul 07 j 05:41	19° \mathfrak{Q} 51'44		minimum elong		-4152 Jun 19 j 03:53	23° \mathfrak{B} 43'41	0°56'49
	-4157 Jul 21 j 18:28	0° \mathfrak{M}				-4152 Jun 28 j 22:16	0° \mathfrak{II}	
	-4157 Aug 31 j 11:52	0° \mathfrak{A}		morning rise		-4152 Aug 03 j 10:54	23° \mathfrak{II} 03'24	
	-4157 Oct 09 j 12:26	0° \mathfrak{M}				-4152 Aug 14 j 00:27	0° \mathfrak{D}	
	-4157 Nov 17 j 07:04	0° \mathfrak{A}				-4152 Sep 27 j 20:55	0° \mathfrak{Q}	
	-4157 Dec 26 j 21:09	0° \mathfrak{B}				-4152 Nov 10 j 12:17	0° \mathfrak{M}	
evening set	-4156 Feb 04 j 23:14	29° \mathfrak{B} 14'42				-4152 Dec 23 j 04:44	0° \mathfrak{A}	
	-4156 Feb 06 j 00:39	0° \approx				-4151 Feb 03 j 11:36	0° \mathfrak{M}	
	-4156 Mar 20 j 02:45	0° \mathfrak{H}		desc. node		-4151 Feb 26 j 09:20	16° \mathfrak{M} 05'48	
						-4151 Mar 18 j 15:31	0° \mathfrak{A}	
conjunction	-4156 Mar 31 j 11:04	7° \mathfrak{H} 40'34	0°-28'-17			-4151 May 06 j 03:00	0° \mathfrak{B}	
minimum elong	-4156 Mar 31 j 12:24	7° \mathfrak{H} 42'48	0°28'21	retrograde		-4151 Jul 01 j 10:14	17° \mathfrak{B} 52'06	
max. Earth dist.	-4156 Apr 23 j 23:56	23° \mathfrak{H} 20'41	2.60155 AU	min. Earth dist.		-4151 Jul 28 j 20:05	12° \mathfrak{B} 47'54	0.44362 AU
	-4156 May 04 j 03:22	0° Υ		greatest brilliancy		-4151 Aug 03 j 17:39	10° \mathfrak{B} 50'09	-2.4m
asc. node	-4156 May 20 j 11:39	10° Υ 37'14		opposition		-4151 Aug 05 j 20:00	10° \mathfrak{B} 07'44	-6°-8'-24
morning rise	-4156 May 21 j 17:54	11° Υ 26'03		direct		-4151 Sep 06 j 21:22	3° \mathfrak{B} 48'40	
	-4156 Jun 19 j 18:35	0° \mathfrak{B}				-4151 Nov 23 j 10:09	0° \approx	
	-4156 Aug 06 j 16:49	0° \mathfrak{II}		asc. node		-4150 Jan 10 j 03:53	26° \approx 49'00	
	-4156 Sep 25 j 05:16	0° \mathfrak{D}				-4150 Jan 15 j 13:39	0° \mathfrak{H}	
	-4156 Nov 17 j 18:24	0° \mathfrak{Q}				-4150 Mar 06 j 11:18	0° Υ	
retrograde	-4155 Feb 07 j 14:02	27° \mathfrak{Q} 01'34				-4150 Apr 24 j 04:08	0° \mathfrak{B}	
opposition	-4155 Mar 13 j 13:17	20° \mathfrak{Q} 21'40	3°56'40	evening set		-4150 Jun 10 j 14:37	29° \mathfrak{B} 58'09	
greatest brilliancy	-4155 Mar 15 j 08:10	19° \mathfrak{Q} 45'40	-2.2m			-4150 Jun 10 j 15:46	0° \mathfrak{II}	
min. Earth dist.	-4155 Mar 22 j 02:33	17° \mathfrak{Q} 30'29	0.47524 AU	max. Earth dist.		-4150 Jul 06 j 10:32	16° \mathfrak{II} 43'04	2.61878 AU
direct	-4155 Apr 19 j 21:43	12° \mathfrak{Q} 12'34				-4150 Jul 26 j 12:34	0° \mathfrak{D}	
desc. node	-4155 May 24 j 06:33	19° \mathfrak{Q} 25'59						
	-4155 Jun 16 j 00:03	0° \mathfrak{M}		conjunction		-4150 Jul 27 j 12:47	0° \mathfrak{D} 40'26	1°11'12
	-4155 Aug 03 j 03:58	0° \mathfrak{A}		minimum elong		-4150 Jul 27 j 12:46	0° \mathfrak{D} 40'25	1°11'23
	-4155 Sep 14 j 01:52	0° \mathfrak{M}				-4150 Sep 08 j 12:22	0° \mathfrak{Q}	
	-4155 Oct 24 j 15:46	0° \mathfrak{A}		morning rise		-4150 Sep 12 j 13:33	2° \mathfrak{Q} 49'35	
	-4155 Dec 04 j 15:32	0° \mathfrak{B}				-4150 Oct 20 j 16:59	0° \mathfrak{M}	
	-4154 Jan 15 j 23:02	0° \approx				-4150 Nov 30 j 10:14	0° \mathfrak{A}	
	-4154 Feb 28 j 23:10	0° \mathfrak{H}				-4149 Jan 09 j 05:08	0° \mathfrak{M}	
evening set	-4154 Mar 24 j 12:49	15° \mathfrak{H} 37'13		desc. node		-4149 Jan 14 j 08:16	3° \mathfrak{M} 53'34	
asc. node	-4154 Apr 07 j 08:28	24° \mathfrak{H} 39'38				-4149 Feb 17 j 19:43	0° \mathfrak{A}	
	-4154 Apr 15 j 13:35	0° Υ				-4149 Mar 30 j 08:57	0° \mathfrak{B}	
						-4149 May 12 j 21:38	0° \approx	
conjunction	-4154 May 13 j 03:40	17° Υ 47'07	0°20'00			-4149 Jul 05 j 11:13	0° \mathfrak{H}	
minimum elong	-4154 May 13 j 02:55	17° Υ 45'54	0°20'03	retrograde		-4149 Aug 17 j 19:20	10° \mathfrak{H} 47'10	
max. Earth dist.	-4154 May 19 j 17:50	22° Υ 00'30	2.66136 AU	min. Earth dist.		-4149 Sep 19 j 14:29	3° \mathfrak{H} 32'31	0.56685 AU
	-4154 Jun 01 j 05:53	0° \mathfrak{B}		opposition		-4149 Sep 25 j 21:16	1° \mathfrak{H} 05'15	-2°-39'-42
morning rise	-4154 Jun 28 j 19:51	17° \mathfrak{B} 34'45		greatest brilliancy		-4149 Sep 25 j 01:51	1° \mathfrak{H} 24'13	-1.8m
	-4154 Jul 18 j 07:59	0° \mathfrak{II}				-4149 Sep 28 j 16:51	30° \mathfrak{R} \approx	
	-4154 Sep 03 j 08:18	0° \mathfrak{D}		direct		-4149 Nov 01 j 02:01	22° \approx 50'58	
	-4154 Oct 20 j 06:14	0° \mathfrak{Q}		asc. node		-4149 Nov 28 j 04:23	26° \approx 56'23	
	-4154 Dec 06 j 16:42	0° \mathfrak{M}				-4149 Dec 08 j 00:00	0° \mathfrak{H}	
	-4153 Jan 25 j 14:47	0° \mathfrak{A}				-4148 Feb 10 j 09:57	0° Υ	
	-4153 Apr 03 j 03:04	0° \mathfrak{M}				-4148 Apr 02 j 21:59	0° \mathfrak{B}	
desc. node	-4153 Apr 11 j 08:54	1° \mathfrak{M} 32'55				-4148 May 21 j 19:21	0° \mathfrak{II}	
retrograde	-4153 Apr 23 j 01:17	2° \mathfrak{M} 23'27				-4148 Jul 07 j 00:27	0° \mathfrak{D}	
	-4153 May 12 j 21:30	30° \mathfrak{R} \mathfrak{A}		evening set		-4148 Jul 20 j 01:04	8° \mathfrak{D} 46'04	
opposition	-4153 May 23 j 10:32	27° \mathfrak{A} 21'12	-3°-6'-3	max. Earth dist.		-4148 Aug 05 j 13:45	20° \mathfrak{D} 05'50	2.52226 AU
greatest brilliancy	-4153 May 23 j 12:51	27° \mathfrak{A} 19'40	-2.9m			-4148 Aug 19 j 17:50	0° \mathfrak{Q}	
min. Earth dist.	-4153 May 24 j 13:52	27° \mathfrak{A} 03'03	0.37819 AU					
direct	-4153 Jun 22 j 21:52	22° \mathfrak{A} 12'21		conjunction		-4148 Sep 08 j 04:17	13° \mathfrak{Q} 51'38	0°51'39
	-4153 Jul 29 j 01:56	0° \mathfrak{M}		minimum elong		-4148 Sep 08 j 06:07	13° \mathfrak{Q} 54'56	0°51'47
	-4153 Sep 23 j 11:29	0° \mathfrak{A}				-4148 Sep 30 j 06:38	0° \mathfrak{M}	
	-4153 Nov 09 j 04:28	0° \mathfrak{B}		morning rise		-4148 Nov 01 j 02:11	23° \mathfrak{M} 52'31	
	-4153 Dec 24 j 18:03	0° \approx				-4148 Nov 09 j 02:50	0° \mathfrak{A}	
	-4152 Feb 08 j 19:21	0° \mathfrak{H}		desc. node		-4148 Dec 01 j 06:44	17° \mathfrak{A} 03'47	
asc. node	-4152 Feb 23 j 04:53	9° \mathfrak{H} 16'02				-4148 Dec 17 j 22:49	0° \mathfrak{M}	

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4147 Jan 25 j 13:35	0°♂		desc. node	-4142 Jul 24 j 00:09	24°♂57'23	
	-4147 Mar 05 j 20:44	0°♂			-4142 Jul 30 j 23:58	0°♂	
	-4147 Apr 15 j 21:35	0°♂			-4142 Sep 09 j 01:49	0°♂	
	-4147 May 30 j 03:51	0°♂			-4142 Oct 17 j 17:26	0°♂	
	-4147 Jul 20 j 15:05	0°♂			-4142 Nov 25 j 04:53	0°♂	
retrograde	-4147 Sep 23 j 06:31	19°♂48'54			-4141 Jan 03 j 12:00	0°♂	
asc. node	-4147 Oct 15 j 05:13	16°♂31'19		evening set	-4141 Jan 13 j 09:12	7°♂22'39	
min. Earth dist.	-4147 Oct 30 j 14:03	10°♂58'24	0.64910 AU		-4141 Feb 13 j 08:51	0°♂	
opposition	-4147 Nov 02 j 07:34	9°♂52'28	0°42'01				
greatest brilliancy	-4147 Nov 02 j 04:43	9°♂55'21	-1.4m	conjunction	-4141 Mar 13 j 05:44	19°♂40'21	0°-46'-20
direct	-4147 Dec 11 j 11:51	0°♂32'10		minimum elong	-4141 Mar 13 j 07:47	19°♂43'55	0°46'28
	-4146 Mar 09 j 05:21	0°♂			-4141 Mar 28 j 05:30	0°♂	
	-4146 May 01 j 06:19	0°♂		max. Earth dist.	-4141 Apr 13 j 13:17	11°♂03'26	2.56405 AU
	-4146 Jun 17 j 18:28	0°♂		morning rise	-4141 May 06 j 10:41	26°♂15'51	
	-4146 Jul 31 j 18:12	0°♂			-4141 May 12 j 03:30	0°♂	
evening set	-4146 Sep 06 j 05:47	26°♂23'49		asc. node	-4141 Jun 07 j 02:41	16°♂47'32	
	-4146 Sep 11 j 02:08	0°♂			-4141 Jun 27 j 22:04	0°♂	
max. Earth dist.	-4146 Oct 01 j 04:39	15°♂09'05	2.40011 AU		-4141 Aug 15 j 12:28	0°♂	
desc. node	-4146 Oct 19 j 03:30	28°♂55'46			-4141 Oct 06 j 02:04	0°♂	
	-4146 Oct 20 j 12:44	0°♂			-4141 Dec 07 j 21:32	0°♂	
				retrograde	-4140 Jan 17 j 09:26	8°♂16'18	
conjunction	-4146 Nov 03 j 13:53	10°♂54'57	0°-11'-4	opposition	-4140 Feb 21 j 22:13	0°♂51'45	4°52'16
minimum elong	-4146 Nov 03 j 12:59	10°♂53'11	0°11'06	greatest brilliancy	-4140 Feb 23 j 19:51	0°♂10'50	-1.9m
behind sun begin	-4146 Nov 02 j 17:17	10°♂14'47			-4140 Feb 24 j 07:54	30°♂	
behind sun end	-4146 Nov 04 j 08:41	11°♂31'36		min. Earth dist.	-4140 Mar 01 j 01:00	27°♂58'12	0.52686 AU
	-4146 Nov 27 j 22:18	0°♂		direct	-4140 Apr 01 j 01:20	21°♂49'54	
	-4145 Jan 05 j 03:56	0°♂			-4140 May 08 j 11:56	0°♂	
morning rise	-4145 Jan 08 j 14:47	2°♂41'29		desc. node	-4140 Jun 09 j 23:39	16°♂02'26	
	-4145 Feb 13 j 02:42	0°♂			-4140 Jul 02 j 17:42	0°♂	
	-4145 Mar 25 j 14:42	0°♂			-4140 Aug 14 j 23:04	0°♂	
	-4145 May 07 j 10:49	0°♂			-4140 Sep 24 j 03:53	0°♂	
	-4145 Jun 22 j 15:24	0°♂			-4140 Nov 02 j 17:44	0°♂	
	-4145 Aug 14 j 01:26	0°♂			-4140 Dec 12 j 23:31	0°♂	
asc. node	-4145 Sep 02 j 06:12	9°♂14'15			-4139 Jan 23 j 16:32	0°♂	
retrograde	-4145 Oct 28 j 00:37	23°♂55'35		evening set	-4139 Mar 06 j 22:41	29°♂07'58	
opposition	-4145 Dec 06 j 16:41	14°♂23'33	3°14'17		-4139 Mar 08 j 05:30	0°♂	
greatest brilliancy	-4145 Dec 06 j 18:36	14°♂21'39	-1.3m		-4139 Apr 22 j 12:35	0°♂	
min. Earth dist.	-4145 Dec 07 j 17:30	13°♂58'45	0.67102 AU	asc. node	-4139 Apr 24 j 00:03	0°♂57'45	
direct	-4144 Jan 16 j 12:56	4°♂29'10					
	-4144 Apr 04 j 12:34	0°♂		conjunction	-4139 Apr 27 j 10:35	3°♂11'56	0°02'00
	-4144 May 26 j 10:55	0°♂		minimum elong	-4139 Apr 27 j 10:28	3°♂11'46	0°02'01
	-4144 Jul 10 j 17:33	0°♂		behind sun begin	-4139 Apr 26 j 14:05	2°♂38'38	
	-4144 Aug 21 j 09:30	0°♂		behind sun end	-4139 Apr 28 j 06:52	3°♂44'52	
desc. node	-4144 Sep 05 j 00:53	10°♂59'23		max. Earth dist.	-4139 May 10 j 04:43	11°♂27'32	2.64426 AU
	-4144 Sep 29 j 19:48	0°♂			-4139 Jun 08 j 02:37	0°♂	
evening set	-4144 Nov 06 j 22:40	29°♂51'34		morning rise	-4139 Jun 14 j 12:13	4°♂04'40	
	-4144 Nov 07 j 02:57	0°♂			-4139 Jul 25 j 09:46	0°♂	
	-4144 Dec 15 j 07:04	0°♂			-4139 Sep 11 j 02:29	0°♂	
					-4139 Oct 29 j 13:57	0°♂	
conjunction	-4143 Jan 11 j 13:44	21°♂06'20	-1°-6'-34		-4139 Dec 19 j 17:35	0°♂	
minimum elong	-4143 Jan 11 j 12:32	21°♂04'01	1°06'46		-4138 Feb 24 j 09:47	0°♂	
	-4143 Jan 23 j 06:04	0°♂		retrograde	-4138 Mar 22 j 07:39	3°♂48'56	
max. Earth dist.	-4143 Mar 01 j 11:42	27°♂37'31	2.44004 AU		-4138 Apr 16 j 22:24	30°♂	
	-4143 Mar 04 j 18:23	0°♂		opposition	-4138 Apr 22 j 15:04	28°♂24'01	0°22'52
morning rise	-4143 Mar 17 j 00:22	8°♂47'25		greatest brilliancy	-4138 Apr 22 j 18:49	28°♂21'18	-2.7m
	-4143 Apr 16 j 09:02	0°♂		min. Earth dist.	-4138 Apr 28 j 10:08	26°♂44'02	0.40236 AU
	-4143 May 31 j 10:18	0°♂		desc. node	-4138 Apr 28 j 00:05	26°♂51'09	
	-4143 Jul 18 j 08:59	0°♂		direct	-4138 May 25 j 17:01	22°♂13'36	
asc. node	-4143 Jul 20 j 05:42	1°♂07'16			-4138 Jun 30 j 05:34	0°♂	
	-4143 Sep 09 j 05:51	0°♂			-4138 Aug 23 j 23:32	0°♂	
retrograde	-4143 Dec 03 j 00:10	28°♂17'40			-4138 Oct 07 j 13:55	0°♂	
opposition	-4142 Jan 10 j 05:57	19°♂33'23	4°51'41		-4138 Nov 19 j 19:35	0°♂	
greatest brilliancy	-4142 Jan 11 j 05:45	19°♂10'15	-1.4m		-4137 Jan 02 j 14:32	0°♂	
min. Earth dist.	-4142 Jan 15 j 02:05	17°♂40'46	0.62923 AU		-4137 Feb 16 j 14:44	0°♂	
direct	-4142 Feb 20 j 07:54	9°♂35'36		asc. node	-4137 Mar 11 j 21:33	15°♂11'39	
	-4142 Apr 27 j 20:32	0°♂			-4137 Apr 03 j 20:17	0°♂	
	-4142 Jun 17 j 16:29	0°♂		evening set	-4137 Apr 18 j 23:10	9°♂41'26	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 27

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4137 May 20 j 19:16	0°♄				-4132 Aug 09 j 00:03	0°♅	
max. Earth dist.	-4137 Jun 03 j 12:03	8°♄43'45	2.67102 AU	retrograde		-4132 Sep 09 j 07:54	5°♅45'15	
						-4132 Oct 08 j 11:15	30°♄♂	
conjunction	-4137 Jun 05 j 15:42	10°♄06'05	0°44'34		min. Earth dist.	-4132 Oct 15 j 00:47	27°♄28'11	0.62369 AU
minimum elong	-4137 Jun 05 j 14:26	10°♄04'05	0°44'41		opposition	-4132 Oct 19 j 05:00	25°♄47'53	0°-30'-28
	-4137 Jul 06 j 18:29	0°♂			greatest brilliancy	-4132 Oct 19 j 02:24	25°♄50'29	-1.5m
morning rise	-4137 Jul 21 j 02:47	9°♂13'46			asc. node	-4132 Oct 31 j 19:53	21°♄06'17	
	-4137 Aug 22 j 02:55	0°♄			direct	-4132 Nov 26 j 09:24	16°♄48'57	
	-4137 Oct 06 j 13:52	0°♂				-4131 Jan 18 j 13:59	0°♅	
	-4137 Nov 20 j 05:37	0°♄				-4131 Mar 19 j 11:05	0°♄	
	-4136 Jan 03 j 11:19	0°♂				-4131 May 09 j 07:20	0°♂	
	-4136 Feb 17 j 06:13	0°♄				-4131 Jun 25 j 04:02	0°♄	
desc. node	-4136 Mar 15 j 02:06	17°♄07'17				-4131 Aug 08 j 00:05	0°♂	
	-4136 Apr 06 j 01:32	0°♄			evening set	-4131 Aug 17 j 00:54	6°♄24'51	
retrograde	-4136 Jun 07 j 09:02	20°♄46'17			max. Earth dist.	-4131 Sep 01 j 22:15	17°♄53'03	2.44697 AU
min. Earth dist.	-4136 Jul 04 j 00:35	16°♄18'06	0.40071 AU			-4131 Sep 18 j 09:07	0°♄	
greatest brilliancy	-4136 Jul 08 j 14:48	14°♄56'42	-2.7m					
opposition	-4136 Jul 10 j 09:06	14°♄25'16	-6°-25'-41	conjunction	-4131 Oct 10 j 12:19	16°♄39'04	0°17'51	
direct	-4136 Aug 09 j 17:28	8°♄59'05		minimum elong	-4131 Oct 10 j 13:30	16°♄41'18	0°17'52	
	-4136 Oct 15 j 01:24	0°♄			-4131 Oct 27 j 22:34	0°♄		
	-4136 Dec 06 j 23:01	0°♄			desc. node	-4131 Nov 04 j 22:27	6°♄10'56	
	-4135 Jan 24 j 23:24	0°♄				-4131 Dec 05 j 11:03	0°♄	
asc. node	-4135 Jan 26 j 19:12	1°♄07'46			morning rise	-4131 Dec 10 j 22:14	4°♄17'04	
	-4135 Mar 14 j 07:19	0°♅				-4130 Jan 12 j 18:57	0°♄	
	-4135 May 01 j 07:11	0°♄				-4130 Feb 20 j 19:17	0°♄	
evening set	-4135 May 26 j 16:42	16°♄02'54				-4130 Apr 02 j 09:29	0°♄	
	-4135 Jun 17 j 12:36	0°♂				-4130 May 15 j 12:49	0°♄	
max. Earth dist.	-4135 Jun 26 j 09:33	5°♂43'26	2.64367 AU			-4130 Jul 01 j 19:00	0°♅	
						-4130 Aug 28 j 16:46	0°♄	
conjunction	-4135 Jul 12 j 07:42	16°♂04'51	1°08'52	asc. node	-4130 Sep 18 j 20:36	7°♄19'52		
minimum elong	-4135 Jul 12 j 07:03	16°♂03'46	1°09'02	retrograde	-4130 Oct 14 j 12:38	11°♄04'58		
	-4135 Aug 02 j 10:10	0°♄		opposition	-4130 Nov 23 j 11:33	1°♄20'29	2°21'16	
morning rise	-4135 Aug 27 j 04:56	16°♄39'25		greatest brilliancy	-4130 Nov 23 j 08:53	1°♄23'09	-1.3m	
	-4135 Sep 15 j 16:22	0°♂		min. Earth dist.	-4130 Nov 23 j 00:50	1°♄31'15	0.67003 AU	
	-4135 Oct 28 j 07:51	0°♄			-4130 Nov 26 j 20:04	30°♄♂		
	-4135 Dec 08 j 15:09	0°♄		direct	-4129 Jan 02 j 20:09	21°♅36'15		
	-4134 Jan 18 j 02:05	0°♄			-4129 Feb 12 j 21:42	0°♄		
desc. node	-4134 Jan 31 j 01:39	9°♄40'23			-4129 Apr 16 j 09:01	0°♂		
	-4134 Feb 27 j 11:41	0°♄			-4129 Jun 04 j 21:15	0°♄		
	-4134 Apr 10 j 06:39	0°♄			-4129 Jul 19 j 12:04	0°♂		
	-4134 May 27 j 04:22	0°♄			-4129 Aug 29 j 23:34	0°♄		
retrograde	-4134 Aug 01 j 03:12	22°♄44'44		desc. node	-4129 Sep 22 j 19:47	18°♄00'44		
min. Earth dist.	-4134 Aug 31 j 19:44	16°♄18'37	0.52097 AU		-4129 Oct 08 j 09:12	0°♄		
greatest brilliancy	-4134 Sep 06 j 19:45	14°♄03'06	-2.0m	evening set	-4129 Oct 12 j 13:10	3°♄14'08		
opposition	-4134 Sep 08 j 05:51	13°♄30'54	-4°-7'-48		-4129 Nov 15 j 16:25	0°♄		
direct	-4134 Oct 12 j 21:40	5°♄55'02						
asc. node	-4134 Dec 14 j 18:53	23°♄57'20		conjunction	-4129 Dec 15 j 19:41	23°♄43'22	0°-53'-11	
	-4134 Dec 27 j 06:48	0°♄		minimum elong	-4129 Dec 15 j 16:28	23°♄37'03	0°53'19	
	-4133 Feb 20 j 06:47	0°♅			-4129 Dec 23 j 20:06	0°♄		
	-4133 Apr 11 j 19:10	0°♄		max. Earth dist.	-4128 Jan 26 j 01:01	25°♄39'59	2.39109 AU	
	-4133 May 29 j 23:55	0°♂			-4128 Jan 31 j 17:44	0°♄		
evening set	-4133 Jul 04 j 18:01	23°♂10'57		morning rise	-4128 Feb 21 j 10:51	15°♄32'29		
	-4133 Jul 15 j 00:18	0°♄			-4128 Mar 12 j 04:11	0°♄		
max. Earth dist.	-4133 Jul 24 j 04:56	6°♄10'32	2.56506 AU		-4128 Apr 23 j 18:30	0°♄		
					-4128 Jun 08 j 01:15	0°♅		
conjunction	-4133 Aug 22 j 03:30	26°♄02'31	1°04'11		-4128 Jul 26 j 23:57	0°♄		
minimum elong	-4133 Aug 22 j 04:43	26°♄04'40	1°04'21	asc. node	-4128 Aug 05 j 20:18	5°♄39'03		
	-4133 Aug 27 j 19:09	0°♂			-4128 Sep 22 j 09:52	0°♂		
	-4133 Oct 08 j 12:56	0°♄		retrograde	-4128 Nov 18 j 01:28	14°♂48'35		
morning rise	-4133 Oct 11 j 14:07	2°♄14'36		opposition	-4128 Dec 26 j 23:58	5°♂42'39	4°21'38	
	-4133 Nov 17 j 15:54	0°♄		greatest brilliancy	-4128 Dec 27 j 13:55	5°♂28'55	-1.3m	
desc. node	-4133 Dec 18 j 23:40	23°♄58'56		min. Earth dist.	-4128 Dec 30 j 08:34	4°♂23'19	0.65321 AU	
	-4133 Dec 26 j 18:56	0°♄			-4127 Jan 11 j 09:37	30°♄♂		
	-4132 Feb 03 j 16:31	0°♄		direct	-4127 Feb 06 j 04:33	25°♄41'41		
	-4132 Mar 14 j 07:03	0°♄			-4127 Mar 06 j 02:45	0°♂		
	-4132 Apr 24 j 20:28	0°♄			-4127 May 10 j 10:40	0°♄		
	-4132 Jun 09 j 14:15	0°♄			-4127 Jun 27 j 00:25	0°♂		

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4127 Aug 08 j 10:32	0°♎				-4122 May 27 j 15:37	0°♏		
desc. node	-4127 Aug 09 j 17:00	0°♎56'04		morning rise		-4122 Jul 06 j 22:59	25°♏42'41		
	-4127 Sep 17 j 03:59	0°♏				-4122 Jul 13 j 16:07	0°♐		
	-4127 Oct 25 j 14:47	0°♐				-4122 Aug 29 j 09:41	0°♑		
	-4127 Dec 02 j 22:06	0°♑				-4122 Oct 14 j 16:43	0°♒		
evening set	-4127 Dec 19 j 04:39	12°♑35'48				-4122 Nov 29 j 20:52	0°♒		
	-4126 Jan 11 j 00:45	0°♑				-4121 Jan 15 j 21:07	0°♑		
						-4121 Mar 08 j 04:42	0°♒		
conjunction	-4126 Feb 19 j 14:38	29°♑12'52	-1°00'-53	desc. node		-4121 Apr 01 j 17:53	11°♒31'07		
minimum elong	-4126 Feb 19 j 16:37	29°♑16'26	1°01'02	retrograde		-4121 May 10 j 18:37	20°♒16'29		
	-4126 Feb 20 j 16:47	0°♒		min. Earth dist.		-4121 Jun 08 j 16:53	15°♒32'59	0.37804 AU	
max. Earth dist.	-4126 Mar 31 j 01:42	27°♒01'45	2.51919 AU	opposition		-4121 Jun 10 j 15:53	15°♒01'17	-4°-51'-45	
	-4126 Apr 04 j 09:29	0°♒		greatest brilliancy		-4121 Jun 10 j 03:34	15°♒09'36	-2.9m	
morning rise	-4126 Apr 18 j 12:24	9°♒36'02		direct		-4121 Jul 10 j 14:47	10°♒01'25		
	-4126 May 19 j 06:23	0°♒				-4121 Sep 11 j 08:35	0°♑		
asc. node	-4126 Jun 23 j 19:27	22°♒47'47				-4121 Nov 01 j 12:46	0°♑		
	-4126 Jul 05 j 07:23	0°♑				-4121 Dec 18 j 16:38	0°♒		
	-4126 Aug 23 j 22:32	0°♑				-4120 Feb 03 j 12:57	0°♑		
	-4126 Oct 18 j 05:04	0°♑		asc. node		-4120 Feb 13 j 11:12	6°♑19'32		
retrograde	-4126 Dec 29 j 03:53	21°♑45'40				-4120 Mar 21 j 19:31	0°♒		
opposition	-4125 Feb 03 j 22:41	13°♑44'46	5°09'49			-4120 May 08 j 07:12	0°♑		
greatest brilliancy	-4125 Feb 05 j 14:05	13°♑07'56	-1.7m	evening set		-4120 May 11 j 19:47	2°♑13'55		
min. Earth dist.	-4125 Feb 10 j 23:16	11°♑07'49	0.57322 AU	max. Earth dist.		-4120 Jun 17 j 00:17	25°♑16'29	2.66090 AU	
direct	-4125 Mar 16 j 04:56	4°♑10'10				-4120 Jun 24 j 08:52	0°♑		
	-4125 May 29 j 13:13	0°♒							
desc. node	-4125 Jun 27 j 16:19	17°♒05'39		conjunction		-4120 Jun 27 j 13:05	2°♑02'40	1°02'13	
	-4125 Jul 15 j 11:37	0°♒		minimum elong		-4120 Jun 27 j 11:59	2°♑00'55	1°02'23	
	-4125 Aug 25 j 20:18	0°♑				-4120 Aug 09 j 09:19	0°♑		
	-4125 Oct 04 j 04:18	0°♑		morning rise		-4120 Aug 11 j 20:52	1°♑38'33		
	-4125 Nov 12 j 04:01	0°♑				-4120 Sep 23 j 00:29	0°♒		
	-4125 Dec 21 j 22:10	0°♑				-4120 Nov 05 j 06:18	0°♒		
	-4124 Feb 01 j 05:02	0°♒				-4120 Dec 17 j 08:49	0°♑		
evening set	-4124 Feb 16 j 18:08	10°♒57'14				-4119 Jan 27 j 19:35	0°♑		
	-4124 Mar 15 j 09:52	0°♑		desc. node		-4119 Feb 16 j 19:23	14°♒27'11		
						-4119 Mar 10 j 14:15	0°♑		
conjunction	-4124 Apr 10 j 15:41	17°♑36'13	0°-17'-11			-4119 Apr 24 j 03:37	0°♑		
minimum elong	-4124 Apr 10 j 16:28	17°♑37'32	0°17'15			-4119 Jun 27 j 02:50	0°♒		
	-4124 Apr 29 j 11:40	0°♒		retrograde		-4119 Jul 13 j 08:55	1°♒50'01		
max. Earth dist.	-4124 Apr 30 j 04:41	0°♒27'47	2.61901 AU			-4119 Jul 29 j 03:59	30°♒3		
asc. node	-4124 May 10 j 16:51	7°♒18'02		min. Earth dist.		-4119 Aug 10 j 21:33	26°♑16'44	0.47113 AU	
morning rise	-4124 May 30 j 14:58	20°♒08'40		greatest brilliancy		-4119 Aug 16 j 23:56	24°♑07'52	-2.2m	
	-4124 Jun 15 j 01:23	0°♑		opposition		-4119 Aug 18 j 22:56	23°♑26'06	-5°-31'-17	
	-4124 Aug 01 j 16:35	0°♑		direct		-4119 Sep 20 j 22:47	16°♑37'18		
	-4124 Sep 19 j 09:18	0°♑				-4119 Nov 11 j 16:25	0°♒		
	-4124 Nov 09 j 10:50	0°♒		asc. node		-4119 Dec 31 j 09:48	25°♒16'29		
	-4123 Jan 09 j 11:05	0°♒				-4118 Jan 08 j 19:46	0°♑		
retrograde	-4123 Feb 21 j 21:05	9°♒28'13				-4118 Mar 01 j 01:20	0°♒		
opposition	-4123 Mar 26 j 19:33	3°♒15'29	2°59'16			-4118 Apr 19 j 07:18	0°♑		
greatest brilliancy	-4123 Mar 28 j 05:19	2°♒48'27	-2.4m			-4118 Jun 06 j 00:37	0°♑		
min. Earth dist.	-4123 Apr 03 j 23:30	0°♒39'20	0.44706 AU	evening set		-4118 Jun 19 j 06:15	8°♑31'10		
	-4123 Apr 06 j 03:10	30°♒0		max. Earth dist.		-4118 Jul 12 j 15:27	23°♑49'03	2.60183 AU	
direct	-4123 May 01 j 21:01	25°♒44'35				-4118 Jul 21 j 22:46	0°♑		
desc. node	-4123 May 14 j 17:14	26°♒52'02							
	-4123 May 27 j 12:51	0°♒		conjunction		-4118 Aug 05 j 12:50	9°♑48'34	1°10'16	
	-4123 Jul 25 j 06:32	0°♑		minimum elong		-4118 Aug 05 j 13:16	9°♑49'18	1°10'27	
	-4123 Sep 07 j 02:56	0°♑				-4118 Sep 03 j 21:11	0°♒		
	-4123 Oct 18 j 14:25	0°♑		morning rise		-4118 Sep 22 j 12:22	13°♒08'29		
	-4123 Nov 29 j 03:46	0°♑				-4118 Oct 15 j 22:06	0°♒		
	-4122 Jan 10 j 20:30	0°♒				-4118 Nov 25 j 10:14	0°♑		
	-4122 Feb 24 j 03:11	0°♑				-4117 Jan 03 j 22:48	0°♑		
asc. node	-4122 Mar 28 j 13:42	21°♑20'48		desc. node		-4117 Jan 04 j 18:46	0°♒38'09		
evening set	-4122 Apr 03 j 00:42	24°♑53'50				-4117 Feb 12 j 05:56	0°♑		
	-4122 Apr 10 j 21:40	0°♒				-4117 Mar 24 j 08:10	0°♑		
						-4117 May 05 j 20:13	0°♒		
conjunction	-4122 May 21 j 20:05	26°♒17'14	0°29'41			-4117 Jun 23 j 19:26	0°♑		
minimum elong	-4122 May 21 j 19:04	26°♒15'36	0°29'45	retrograde		-4117 Aug 26 j 16:28	20°♑35'38		
max. Earth dist.	-4122 May 25 j 04:39	28°♒25'53	2.66712 AU	min. Earth dist.		-4117 Sep 29 j 13:37	12°♑57'25	0.58924 AU	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 29

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

opposition	-4117 Oct 05 j 03:35	10° K 45'06	-1°-50'-25		-4112 Dec 10 j 12:18	0° J	
greatest brilliancy	-4117 Oct 04 j 15:24	10° K 57'07	-1.7m		-4111 Jan 18 j 11:41	0° Z	
direct	-4117 Nov 11 j 03:08	2° K 13'04					
asc. node	-4117 Nov 18 j 09:49	2° K 32'36		conjunction	-4111 Jan 26 j 09:10	5° Z 57'10	-1°-7'-46
	-4116 Feb 03 j 01:21	0° Y		minimum elong	-4111 Jan 26 j 09:30	5° Z 57'47	1°07'59
	-4116 Mar 28 j 09:45	0° X			-4111 Feb 28 j 00:06	0° \approx	
	-4116 May 16 j 21:44	0° II		max. Earth dist.	-4111 Mar 14 j 06:02	10° \approx 12'42	2.46888 AU
	-4116 Jul 02 j 08:10	0° S		morning rise	-4111 Mar 29 j 12:29	20° \approx 57'37	
evening set	-4116 Jul 29 j 19:34	18° S 37'40			-4111 Apr 11 j 14:11	0° K	
max. Earth dist.	-4116 Aug 14 j 06:17	29° S 23'48	2.49628 AU		-4111 May 26 j 12:12	0° Y	
	-4116 Aug 15 j 02:50	0° Ω		asc. node	-4111 Jul 10 j 10:50	28° Y 25'49	
					-4111 Jul 13 j 00:16	0° X	
conjunction	-4116 Sep 19 j 05:36	25° Ω 17'51	0°41'19		-4111 Sep 02 j 07:17	0° II	
minimum elong	-4116 Sep 19 j 07:30	25° Ω 21'21	0°41'25		-4111 Nov 05 j 15:07	0° S	
	-4116 Sep 25 j 14:32	0° M		retrograde	-4111 Dec 12 j 02:13	6° S 49'57	
	-4116 Nov 04 j 08:35	0° A			-4110 Jan 14 j 10:58	30° R II	
morning rise	-4116 Nov 14 j 13:30	7° A 51'19		opposition	-4110 Jan 18 j 21:09	28° II 19'41	5°03'05
desc. node	-4116 Nov 21 j 16:09	13° A 21'15		greatest brilliancy	-4110 Jan 20 j 02:45	27° II 51'15	-1.5m
	-4116 Dec 13 j 01:49	0° M		min. Earth dist.	-4110 Jan 24 j 12:55	26° II 09'38	0.61165 AU
	-4115 Jan 20 j 13:48	0° J		direct	-4110 Feb 28 j 18:45	18° II 27'23	
	-4115 Feb 28 j 17:43	0° Z			-4110 Apr 16 j 23:44	0° S	
	-4115 Apr 10 j 12:50	0° \approx			-4110 Jun 11 j 01:26	0° Ω	
	-4115 May 24 j 05:15	0° K		desc. node	-4110 Jul 14 j 08:55	22° Ω 15'27	
	-4115 Jul 12 j 10:54	0° Y			-4110 Jul 25 j 07:10	0° M	
retrograde	-4115 Oct 01 j 01:45	27° Y 59'18			-4110 Sep 03 j 18:07	0° A	
asc. node	-4115 Oct 05 j 11:20	27° Y 51'30			-4110 Oct 12 j 14:35	0° M	
min. Earth dist.	-4115 Nov 08 j 05:16	18° Y 52'32	0.65911 AU		-4110 Nov 20 j 05:30	0° J	
opposition	-4115 Nov 10 j 03:32	18° Y 05'59	1°20'44		-4110 Dec 29 j 15:33	0° Z	
greatest brilliancy	-4115 Nov 09 j 23:32	18° Y 10'00	-1.3m	evening set	-4109 Jan 26 j 11:40	20° Z 31'57	
direct	-4115 Dec 19 j 19:39	8° Y 35'59			-4109 Feb 08 j 14:41	0° \approx	
	-4114 Mar 01 j 09:37	0° X			-4109 Mar 23 j 13:00	0° K	
	-4114 Apr 25 j 15:38	0° II					
	-4114 Jun 12 j 18:43	0° S		conjunction	-4109 Mar 24 j 10:09	0° K 36'03	0°-36'-11
	-4114 Jul 26 j 23:50	0° Ω		minimum elong	-4109 Mar 24 j 11:50	0° K 38'56	0°36'17
	-4114 Sep 06 j 09:12	0° M		max. Earth dist.	-4109 Apr 20 j 10:44	18° K 47'02	2.58568 AU
evening set	-4114 Sep 18 j 15:33	9° M 12'10			-4109 May 07 j 11:02	0° Y	
desc. node	-4114 Oct 09 j 13:17	25° M 09'50		morning rise	-4109 May 15 j 22:10	5° Y 31'10	
	-4114 Oct 15 j 19:32	0° A		asc. node	-4109 May 28 j 08:52	13° Y 34'19	
max. Earth dist.	-4114 Oct 29 j 06:05	10° A 27'16	2.38085 AU		-4109 Jun 23 j 02:35	0° X	
					-4109 Aug 10 j 06:20	0° II	
conjunction	-4114 Nov 18 j 07:15	26° A 10'22	0°-27'-55		-4109 Sep 29 j 11:55	0° S	
minimum elong	-4114 Nov 18 j 04:58	26° A 05'53	0°27'58		-4109 Nov 24 j 15:31	0° Ω	
	-4114 Nov 23 j 03:58	0° M		retrograde	-4108 Jan 29 j 13:17	19° Ω 01'35	
	-4114 Dec 31 j 08:26	0° J		opposition	-4108 Mar 04 j 06:05	12° Ω 00'52	4°25'51
morning rise	-4113 Jan 24 j 22:26	19° J 03'46		greatest brilliancy	-4108 Mar 06 j 03:48	11° Ω 21'14	-2.1m
	-4113 Feb 08 j 06:08	0° Z		min. Earth dist.	-4108 Mar 12 j 17:54	9° Ω 05'11	0.49853 AU
	-4113 Mar 20 j 16:30	0° \approx		direct	-4108 Apr 11 j 12:18	3° Ω 25'20	
	-4113 May 02 j 08:57	0° K		desc. node	-4108 May 31 j 09:16	17° Ω 19'17	
	-4113 Jun 17 j 02:13	0° Y			-4108 Jun 23 j 15:11	0° M	
	-4113 Aug 06 j 18:08	0° X			-4108 Aug 08 j 01:06	0° A	
asc. node	-4113 Aug 23 j 12:17	8° X 49'10			-4108 Sep 18 j 01:54	0° M	
	-4113 Oct 18 j 10:44	0° II			-4108 Oct 28 j 03:18	0° J	
retrograde	-4113 Nov 04 j 21:55	1° II 46'39			-4108 Dec 07 j 17:38	0° Z	
	-4113 Nov 21 j 08:48	30° R X			-4107 Jan 18 j 17:06	0° \approx	
opposition	-4113 Dec 14 j 09:09	22° X 23'01	3°41'32		-4107 Mar 03 j 11:00	0° K	
greatest brilliancy	-4113 Dec 14 j 14:45	22° X 17'27	-1.3m	evening set	-4107 Mar 17 j 03:56	9° K 09'38	
min. Earth dist.	-4113 Dec 16 j 05:46	21° X 38'39	0.66738 AU	asc. node	-4107 Apr 14 j 05:56	27° K 38'14	
direct	-4112 Jan 24 j 10:15	12° X 25'03			-4107 Apr 17 j 21:00	0° Y	
	-4112 Mar 26 j 23:13	0° II					
	-4112 May 20 j 13:25	0° S		conjunction	-4107 May 06 j 13:06	12° Y 05'08	0°12'38
	-4112 Jul 05 j 12:37	0° Ω		minimum elong	-4107 May 06 j 12:36	12° Y 04'19	0°12'39
	-4112 Aug 16 j 10:41	0° M		behind sun begin	-4107 May 06 j 00:24	11° Y 44'41	
desc. node	-4112 Aug 26 j 10:55	7° M 27'48		behind sun end	-4107 May 07 j 00:47	12° Y 23'56	
	-4112 Sep 24 j 23:34	0° A		max. Earth dist.	-4107 May 15 j 19:12	18° Y 02'20	2.65479 AU
	-4112 Nov 02 j 07:42	0° M			-4107 Jun 03 j 11:40	0° X	
evening set	-4112 Nov 22 j 06:49	15° M 42'52		morning rise	-4107 Jun 22 j 18:40	12° X 17'35	
greatest brilliancy	-4112 Dec 07 j 05:24	27° M 25'57	1.2m		-4107 Jul 20 j 15:33	0° II	

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4107 Sep 05 j 22:28	0°☿		direct	-4102 Oct 24 j 03:22	16°≈14'31	
	-4107 Oct 23 j 11:07	0°♈		asc. node	-4102 Dec 05 j 01:09	25°≈15'14	
	-4107 Dec 11 j 04:47	0°♉			-4102 Dec 16 j 19:47	0°♊	
	-4106 Feb 02 j 20:34	0°♋			-4101 Feb 14 j 00:34	0°♌	
retrograde	-4106 Apr 08 j 22:42	19°♌48'38			-4101 Apr 06 j 14:40	0°♍	
desc. node	-4106 Apr 18 j 11:27	19°♌14'49			-4101 May 25 j 05:21	0°♎	
opposition	-4106 May 09 j 13:02	14°♌42'05	-1°-33'-18		-4101 Jul 10 j 09:23	0°☿	
greatest brilliancy	-4106 May 09 j 18:59	14°♌38'02	-2.8m	evening set	-4101 Jul 13 j 22:55	2°☿22'56	
min. Earth dist.	-4106 May 13 j 01:06	13°♌44'59	0.38554 AU	max. Earth dist.	-4101 Jul 31 j 13:46	14°☿18'39	2.54225 AU
direct	-4106 Jun 09 j 23:46	9°♌11'25			-4101 Aug 23 j 04:42	0°♏	
	-4106 Aug 11 j 20:15	0°♍					
	-4106 Sep 29 j 13:49	0°♎		conjunction	-4101 Sep 01 j 04:55	6°♏22'06	0°57'50
	-4106 Nov 13 j 09:13	0°♏		minimum elong	-4101 Sep 01 j 06:32	6°♏24'58	0°57'58
	-4106 Dec 28 j 00:26	0°≈			-4101 Oct 03 j 20:38	0°♐	
	-4105 Feb 11 j 12:51	0°♑		morning rise	-4101 Oct 23 j 10:00	14°♐32'22	
asc. node	-4105 Mar 02 j 02:00	12°♑01'43			-4101 Nov 12 j 20:32	0°♒	
	-4105 Mar 30 j 01:37	0°♑		desc. node	-4101 Dec 09 j 10:00	20°♒23'50	
evening set	-4105 Apr 27 j 19:42	18°♑19'25			-4101 Dec 21 j 19:46	0°♓	
	-4105 May 16 j 04:29	0°♒			-4100 Jan 29 j 13:04	0°♑	
max. Earth dist.	-4105 Jun 08 j 20:46	15°♒04'40	2.66977 AU		-4100 Mar 08 j 22:25	0°♓	
					-4100 Apr 19 j 02:24	0°≈	
conjunction	-4105 Jun 14 j 00:56	18°♒22'53	0°51'59		-4100 Jun 02 j 18:45	0°♑	
minimum elong	-4105 Jun 13 j 23:39	18°♒20'51	0°52'07		-4100 Jul 26 j 10:00	0°♑	
	-4105 Jul 02 j 04:12	0°♒		retrograde	-4100 Sep 17 j 09:37	14°♑21'52	
morning rise	-4105 Jul 29 j 07:24	17°♒31'59		asc. node	-4100 Oct 22 j 01:59	6°♑32'25	
	-4105 Aug 17 j 09:23	0°☿		min. Earth dist.	-4100 Oct 24 j 00:46	5°♑45'52	0.63890 AU
	-4105 Oct 01 j 12:33	0°♏		opposition	-4100 Oct 27 j 10:04	4°♑24'17	0°12'37
	-4105 Nov 14 j 14:15	0°♐		greatest brilliancy	-4100 Oct 27 j 08:59	4°♑25'22	-1.4m
	-4105 Dec 27 j 21:41	0°♑			-4100 Nov 08 j 01:24	30°♑	
	-4104 Feb 09 j 01:52	0°♒		direct	-4100 Dec 05 j 04:48	25°♑12'50	
desc. node	-4104 Mar 05 j 12:09	17°♒18'32			-4099 Jan 04 j 03:00	0°♑	
	-4104 Mar 24 j 21:16	0°♑			-4099 Mar 12 j 23:40	0°♒	
	-4104 May 19 j 09:54	0°♓			-4099 May 04 j 01:11	0°♒	
retrograde	-4104 Jun 21 j 12:37	6°♓58'26			-4099 Jun 20 j 07:39	0°☿	
min. Earth dist.	-4104 Jul 18 j 08:02	2°♓13'49	0.42277 AU		-4099 Aug 03 j 07:11	0°♏	
greatest brilliancy	-4104 Jul 23 j 19:30	0°♓29'58	-2.5m	evening set	-4099 Aug 28 j 06:12	17°♏53'37	
opposition	-4104 Jul 25 j 20:51	29°♑50'31	-6°-26'-15		-4099 Sep 13 j 16:40	0°♐	
	-4104 Jul 25 j 08:58	30°♒		max. Earth dist.	-4099 Sep 16 j 05:35	1°♐53'25	2.42016 AU
direct	-4104 Aug 26 j 03:36	23°♑56'04					
	-4104 Sep 27 j 14:22	0°♓		conjunction	-4099 Oct 23 j 18:42	0°♒25'44	0°01'50
	-4104 Nov 29 j 01:02	0°≈		minimum elong	-4099 Oct 23 j 18:52	0°♒26'03	0°01'50
asc. node	-4103 Jan 17 j 00:28	28°≈47'14		behind sun begin	-4099 Oct 22 j 17:31	29°♐37'08	
	-4103 Jan 19 j 00:42	0°♑		behind sun end	-4099 Oct 24 j 20:14	1°♒15'01	
	-4103 Mar 09 j 03:51	0°♑			-4099 Oct 23 j 05:22	0°♒	
	-4103 Apr 26 j 12:58	0°♒		desc. node	-4099 Oct 26 j 07:14	2°♒22'41	
evening set	-4103 Jun 04 j 05:49	24°♒26'21			-4099 Nov 30 j 16:30	0°♓	
	-4103 Jun 12 j 22:20	0°♒		morning rise	-4099 Dec 26 j 22:15	20°♓35'46	
max. Earth dist.	-4103 Jul 02 j 04:01	12°♒26'17	2.63095 AU		-4098 Jan 07 j 22:50	0°♑	
					-4098 Feb 15 j 21:32	0°♓	
conjunction	-4103 Jul 20 j 23:06	24°♒46'14	1°10'47		-4098 Mar 28 j 09:04	0°≈	
minimum elong	-4103 Jul 20 j 22:48	24°♒45'44	1°10'58		-4098 May 10 j 06:07	0°♑	
	-4103 Jul 28 j 20:12	0°☿			-4098 Jun 25 j 17:34	0°♑	
morning rise	-4103 Sep 05 j 09:22	26°☿07'35			-4098 Aug 18 j 16:14	0°♒	
	-4103 Sep 10 j 23:45	0°♏		asc. node	-4098 Sep 09 j 02:49	9°♒24'03	
	-4103 Oct 23 j 09:42	0°♐		retrograde	-4098 Oct 22 j 05:51	18°♒54'53	
	-4103 Dec 03 j 09:29	0°♑		opposition	-4098 Dec 01 j 02:06	9°♒16'52	2°53'01
	-4102 Jan 12 j 11:04	0°♒		greatest brilliancy	-4098 Dec 01 j 01:37	9°♒17'21	-1.3m
desc. node	-4102 Jan 21 j 11:17	6°♒47'16		min. Earth dist.	-4098 Dec 01 j 11:01	9°♒07'57	0.67181 AU
	-4102 Feb 21 j 08:46	0°♑			-4097 Jan 01 j 09:23	30°♒	
	-4102 Apr 03 j 07:50	0°♓		direct	-4097 Jan 10 j 18:29	29°♑26'29	
	-4102 May 17 j 19:35	0°≈			-4097 Jan 20 j 11:26	0°♒	
	-4102 Jul 17 j 20:12	0°♑			-4097 Apr 09 j 14:57	0°♒	
retrograde	-4102 Aug 10 j 20:34	3°♑44'14			-4097 May 30 j 11:26	0°☿	
	-4102 Sep 02 j 18:02	30°♒			-4097 Jul 14 j 12:26	0°♏	
min. Earth dist.	-4102 Sep 11 j 17:35	26°≈50'54	0.54708 AU		-4097 Aug 25 j 03:22	0°♐	
greatest brilliancy	-4102 Sep 17 j 12:22	24°≈37'21	-1.8m	desc. node	-4097 Sep 13 j 04:11	14°♐19'07	
opposition	-4102 Sep 18 j 14:01	24°≈12'39	-3°-17'00		-4097 Oct 03 j 14:05	0°♑	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 31

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

evening set	-4097 Oct 27 j 05:53	18°♄28'27			-4092 Jun 10 j 08:47	0°♄	
	-4097 Nov 10 j 21:24	0°♄			-4092 Jul 27 j 18:41	0°♄	
	-4097 Dec 19 j 00:57	0°♄			-4092 Sep 13 j 20:38	0°♄	
					-4092 Nov 02 j 06:35	0°♄	
conjunction	-4097 Dec 31 j 15:35	9°♄49'05	-1°-2'-33		-4092 Dec 26 j 04:37	0°♄	
minimum elong	-4097 Dec 31 j 13:16	9°♄44'35	1°02'43	retrograde	-4091 Mar 09 j 08:50	23°♄06'00	
	-4096 Jan 26 j 22:38	0°♄		opposition	-4091 Apr 10 j 08:50	17°♄20'40	1°39'31
max. Earth dist.	-4096 Feb 17 j 22:40	16°♄29'53	2.41697 AU	greatest brilliancy	-4091 Apr 11 j 03:00	17°♄06'53	-2.6m
morning rise	-4096 Mar 06 j 18:24	29°♄33'38		min. Earth dist.	-4091 Apr 17 j 12:17	15°♄11'18	0.42070 AU
	-4096 Mar 07 j 08:57	0°♄		desc. node	-4091 May 05 j 03:15	11°♄12'42	
	-4096 Apr 18 j 21:55	0°♄		direct	-4091 May 14 j 19:36	10°♄33'40	
	-4096 Jun 02 j 23:35	0°♄			-4091 Jul 13 j 10:19	0°♄	
	-4096 Jul 21 j 05:23	0°♄			-4091 Aug 30 j 03:41	0°♄	
asc. node	-4096 Jul 27 j 02:54	3°♄29'34			-4091 Oct 12 j 01:04	0°♄	
	-4096 Sep 13 j 10:55	0°♄			-4091 Nov 23 j 09:21	0°♄	
retrograde	-4096 Nov 26 j 11:13	22°♄54'10			-4090 Jan 05 j 14:24	0°♄	
opposition	-4095 Jan 04 j 01:44	13°♄59'34	4°40'07		-4090 Feb 19 j 05:08	0°♄	
greatest brilliancy	-4095 Jan 04 j 21:00	13°♄40'44	-1.4m	asc. node	-4090 Mar 18 j 19:06	18°♄05'16	
min. Earth dist.	-4095 Jan 08 j 06:11	12°♄21'31	0.64129 AU		-4090 Apr 06 j 04:36	0°♄	
direct	-4095 Feb 14 j 06:29	3°♄59'29		evening set	-4090 Apr 12 j 06:11	3°♄54'26	
	-4095 May 02 j 22:36	0°♄			-4090 May 23 j 00:51	0°♄	
	-4095 Jun 21 j 05:28	0°♄					
desc. node	-4095 Jul 31 j 03:19	27°♄47'49		conjunction	-4090 May 30 j 09:22	4°♄41'26	0°38'38
	-4095 Aug 03 j 03:57	0°♄		minimum elong	-4090 May 30 j 08:09	4°♄39'31	0°38'44
	-4095 Sep 12 j 02:34	0°♄		max. Earth dist.	-4090 May 30 j 15:10	4°♄50'41	2.67033 AU
	-4095 Oct 20 j 15:57	0°♄			-4090 Jul 09 j 00:29	0°♄	
	-4095 Nov 28 j 00:51	0°♄		morning rise	-4090 Jul 15 j 02:07	3°♄53'21	
evening set	-4094 Jan 02 j 18:12	27°♄23'54			-4090 Aug 24 j 13:05	0°♄	
	-4094 Jan 06 j 05:01	0°♄			-4090 Oct 09 j 08:43	0°♄	
	-4094 Feb 15 j 22:24	0°♄			-4090 Nov 23 j 15:01	0°♄	
					-4089 Jan 07 j 21:09	0°♄	
conjunction	-4094 Mar 04 j 05:40	11°♄37'20	0°-53'-8		-4089 Feb 23 j 14:26	0°♄	
minimum elong	-4094 Mar 04 j 07:51	11°♄41'12	0°53'17	desc. node	-4089 Mar 23 j 04:51	16°♄11'30	
	-4094 Mar 30 j 15:54	0°♄			-4089 Apr 20 j 18:49	0°♄	
max. Earth dist.	-4094 Apr 08 j 04:43	5°♄49'04	2.54497 AU	retrograde	-4089 May 27 j 10:44	8°♄06'03	
morning rise	-4094 Apr 28 j 23:54	19°♄46'48		min. Earth dist.	-4089 Jun 23 j 15:20	3°♄39'35	0.38718 AU
	-4094 May 14 j 12:04	0°♄		greatest brilliancy	-4089 Jun 27 j 02:01	2°♄41'31	-2.8m
asc. node	-4094 Jun 14 j 00:21	19°♄41'10		opposition	-4089 Jun 28 j 08:41	2°♄19'55	-6°-1'-14
	-4094 Jun 30 j 08:03	0°♄			-4089 Jul 07 j 02:22	30°♄	
	-4094 Aug 18 j 06:42	0°♄		direct	-4089 Jul 28 j 06:14	27°♄11'10	
	-4094 Oct 10 j 01:15	0°♄			-4089 Aug 18 j 15:04	0°♄	
	-4094 Dec 24 j 09:33	0°♄			-4089 Oct 23 j 10:00	0°♄	
retrograde	-4093 Jan 08 j 18:11	1°♄22'14			-4089 Dec 12 j 03:16	0°♄	
	-4093 Jan 23 j 11:31	30°♄			-4088 Jan 29 j 01:02	0°♄	
opposition	-4093 Feb 13 j 21:41	23°♄40'28	5°02'53	asc. node	-4088 Feb 03 j 16:31	3°♄32'39	
greatest brilliancy	-4093 Feb 15 j 17:14	23°♄00'38	-1.8m		-4088 Mar 16 j 20:25	0°♄	
min. Earth dist.	-4093 Feb 21 j 14:29	20°♄52'16	0.54855 AU		-4088 May 03 j 14:37	0°♄	
direct	-4093 Mar 25 j 15:25	14°♄21'44		evening set	-4088 May 20 j 09:00	10°♄36'05	
	-4093 May 19 j 03:15	0°♄			-4088 Jun 19 j 18:32	0°♄	
desc. node	-4093 Jun 18 j 03:05	16°♄48'49		max. Earth dist.	-4088 Jun 22 j 12:41	1°♄46'24	2.65235 AU
	-4093 Jul 08 j 13:50	0°♄					
	-4093 Aug 19 j 21:09	0°♄		conjunction	-4088 Jul 05 j 23:41	10°♄28'32	1°06'33
	-4093 Sep 28 j 15:50	0°♄		minimum elong	-4088 Jul 05 j 22:49	10°♄27'08	1°06'43
	-4093 Nov 06 j 22:11	0°♄			-4088 Aug 04 j 17:59	0°♄	
	-4093 Dec 16 j 21:28	0°♄		morning rise	-4088 Aug 20 j 13:20	10°♄32'42	
	-4092 Jan 27 j 08:23	0°♄			-4088 Sep 18 j 04:52	0°♄	
evening set	-4092 Feb 27 j 22:12	21°♄59'36			-4088 Oct 31 j 03:08	0°♄	
	-4092 Mar 10 j 16:14	0°♄			-4088 Dec 11 j 18:58	0°♄	
					-4087 Jan 21 j 15:39	0°♄	
conjunction	-4092 Apr 20 j 10:05	27°♄07'15	0°-6'-1	desc. node	-4087 Feb 07 j 05:05	12°♄12'03	
minimum elong	-4092 Apr 20 j 10:21	27°♄07'39	0°06'04		-4087 Mar 03 j 13:06	0°♄	
behind sun begin	-4092 Apr 19 j 14:47	26°♄35'38			-4087 Apr 15 j 04:42	0°♄	
behind sun end	-4092 Apr 21 j 05:54	27°♄39'40			-4087 Jun 04 j 03:57	0°♄	
	-4092 Apr 24 j 19:44	0°♄		retrograde	-4087 Jul 24 j 07:41	14°♄30'38	
asc. node	-4092 Apr 30 j 21:26	3°♄57'27		min. Earth dist.	-4087 Aug 23 j 00:56	8°♄28'16	0.49879 AU
max. Earth dist.	-4092 May 06 j 04:50	7°♄24'17	2.63397 AU	greatest brilliancy	-4087 Aug 29 j 03:58	6°♄13'23	-2.1m
morning rise	-4092 Jun 08 j 06:15	28°♄39'26		opposition	-4087 Aug 30 j 20:25	5°♄36'08	-4°-45'-16

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4087 Sep 18 j 04:24	30° $\text{R}\overline{\text{Z}}$				-4082 Nov 18 j 10:40	0° M		
direct	-4087 Oct 03 j 18:26	28° $\overline{\text{Z}}20'25$							
	-4087 Oct 20 j 07:28	0° \approx		conjunction	-4082 Dec 03 j 15:17	11° $\text{M}58'17$	0°-43'-18		
asc. node	-4087 Dec 21 j 15:54	24° $\approx26'41$		minimum elong	-4082 Dec 03 j 12:05	11° $\text{M}51'59$	0°43'23		
	-4086 Jan 01 j 06:38	0° H		max. Earth dist.	-4082 Dec 22 j 14:03	26° $\text{M}51'41$	2.37741 AU		
	-4086 Feb 23 j 09:32	0° Y			-4082 Dec 26 j 14:16	0° Z			
	-4086 Apr 14 j 08:06	0° B			-4081 Feb 03 j 11:00	0° $\overline{\text{Z}}$			
	-4086 Jun 01 j 08:16	0° II		morning rise	-4081 Feb 09 j 18:56	4° $\overline{\text{Z}}47'32$			
evening set	-4086 Jun 28 j 01:32	17° $\text{II}15'16$			-4081 Mar 15 j 20:06	0° \approx			
	-4086 Jul 17 j 08:33	0° $\overline{\text{S}}$			-4081 Apr 27 j 09:26	0° H			
max. Earth dist.	-4086 Jul 19 j 02:17	1° $\overline{\text{S}}09'43$	2.58229 AU		-4081 Jun 11 j 18:19	0° Y			
					-4081 Jul 31 j 05:19	0° B			
conjunction	-4086 Aug 14 j 21:10	19° $\overline{\text{S}}19'59$	1°07'29	asc. node	-4081 Aug 13 j 17:02	7° $\text{B}31'38$			
minimum elong	-4086 Aug 14 j 22:04	19° $\overline{\text{S}}21'32$	1°07'39		-4081 Sep 29 j 21:39	0° II			
	-4086 Aug 30 j 05:57	0° Q		retrograde	-4081 Nov 12 j 22:34	9° $\text{II}40'00$			
morning rise	-4086 Oct 03 j 02:34	24° $\text{Q}08'21$		opposition	-4081 Dec 22 j 03:56	0° $\text{II}25'41$	4°05'46		
	-4086 Oct 11 j 03:38	0° M		greatest brilliancy	-4081 Dec 22 j 13:57	0° $\text{II}15'47$	-1.3m		
	-4086 Nov 20 j 11:07	0° $\underline{\text{A}}$			-4081 Dec 23 j 05:54	30° RB			
desc. node	-4086 Dec 26 j 03:08	27° $\underline{\text{A}}12'10$		min. Earth dist.	-4081 Dec 24 j 20:38	29° $\text{B}21'44$	0.66087 AU		
	-4086 Dec 29 j 18:32	0° M		direct	-4080 Feb 01 j 08:23	20° $\text{B}25'24$			
	-4085 Feb 06 j 19:49	0° Z			-4080 Mar 15 j 23:21	0° II			
	-4085 Mar 18 j 14:14	0° $\overline{\text{Z}}$			-4080 May 14 j 06:33	0° $\overline{\text{S}}$			
	-4085 Apr 29 j 10:22	0° \approx			-4080 Jun 30 j 03:49	0° Q			
	-4085 Jun 15 j 02:12	0° H			-4080 Aug 11 j 09:36	0° M			
retrograde	-4085 Sep 04 j 04:20	29° $\text{H}50'43$		desc. node	-4080 Aug 16 j 20:21	4° $\text{M}01'55$			
min. Earth dist.	-4085 Oct 09 j 02:33	21° $\text{H}50'33$	0.60934 AU		-4080 Sep 20 j 01:42	0° $\underline{\text{A}}$			
opposition	-4085 Oct 13 j 22:12	19° $\text{H}55'28$	-1°-3'-17		-4080 Oct 28 j 11:32	0° M			
greatest brilliancy	-4085 Oct 13 j 16:04	20° $\text{H}01'34$	-1.6m		-4080 Dec 05 j 17:12	0° Z			
asc. node	-4085 Nov 08 j 16:59	12° $\text{H}03'31$		evening set	-4080 Dec 07 j 14:11	1° $\text{Z}27'40$			
direct	-4085 Nov 20 j 14:47	11° $\text{H}07'47$			-4079 Jan 13 j 17:29	0° $\overline{\text{Z}}$			
	-4084 Jan 25 j 12:50	0° Y							
	-4084 Mar 22 j 15:33	0° B		conjunction	-4079 Feb 09 j 10:10	19° $\overline{\text{Z}}54'17$	-1°-5'00		
	-4084 May 11 j 21:57	0° II		minimum elong	-4079 Feb 09 j 11:39	19° $\overline{\text{Z}}57'02$	1°05'12		
	-4084 Jun 27 j 15:17	0° $\overline{\text{S}}$			-4079 Feb 23 j 06:41	0° \approx			
evening set	-4084 Aug 08 j 23:13	28° $\overline{\text{S}}55'15$		max. Earth dist.	-4079 Mar 24 j 10:02	20° $\approx41'43$	2.49715 AU		
	-4084 Aug 10 j 12:01	0° Q			-4079 Apr 06 j 20:35	0° H			
max. Earth dist.	-4084 Aug 24 j 00:46	9° $\text{Q}37'13$	2.46919 AU	morning rise	-4079 Apr 10 j 04:39	2° $\text{H}17'10$			
	-4084 Sep 20 j 23:11	0° M			-4079 May 21 j 16:22	0° Y			
				asc. node	-4079 Jun 30 j 16:30	25° $\text{Y}33'12$			
conjunction	-4084 Sep 30 j 23:14	7° $\text{M}27'28$	0°28'44		-4079 Jul 07 j 20:05	0° B			
minimum elong	-4084 Oct 01 j 00:53	7° $\text{M}30'33$	0°28'48		-4079 Aug 27 j 00:10	0° II			
	-4084 Oct 30 j 15:14	0° $\underline{\text{A}}$			-4079 Oct 23 j 17:55	0° $\overline{\text{S}}$			
desc. node	-4084 Nov 12 j 01:57	9° $\underline{\text{A}}36'35$		retrograde	-4079 Dec 21 j 14:07	15° $\overline{\text{S}}39'00$			
morning rise	-4084 Nov 29 j 01:30	22° $\underline{\text{A}}49'21$		opposition	-4078 Jan 27 j 20:57	7° $\overline{\text{S}}24'09$	5°08'53		
	-4084 Dec 08 j 05:59	0° M		greatest brilliancy	-4078 Jan 29 j 08:12	6° $\overline{\text{S}}50'48$	-1.6m		
	-4083 Jan 15 j 15:13	0° Z		min. Earth dist.	-4078 Feb 03 j 07:56	4° $\overline{\text{S}}57'57$	0.59157 AU		
greatest brilliancy	-4083 Jan 27 j 16:02	9° $\text{Z}20'00$	1.2m		-4078 Feb 18 j 19:21	30° RII			
	-4083 Feb 23 j 16:12	0° $\overline{\text{Z}}$		direct	-4078 Mar 09 j 12:12	27° $\text{II}40'04$			
	-4083 Apr 05 j 07:04	0° \approx			-4078 Mar 29 j 02:32	0° $\overline{\text{S}}$			
	-4083 May 18 j 13:17	0° H			-4078 Jun 03 j 16:48	0° Q			
	-4083 Jul 05 j 09:11	0° Y		desc. node	-4078 Jul 04 j 19:15	19° $\text{Q}57'30$			
	-4083 Sep 05 j 21:01	0° B			-4078 Jul 19 j 07:50	0° M			
asc. node	-4083 Sep 25 j 17:35	4° $\text{B}56'02$			-4078 Aug 29 j 06:31	0° $\underline{\text{A}}$			
retrograde	-4083 Oct 08 j 19:26	5° $\text{B}59'27$			-4078 Oct 07 j 09:08	0° M			
	-4083 Nov 08 j 02:12	30° RY			-4078 Nov 15 j 04:07	0° Z			
opposition	-4083 Nov 17 j 20:44	26° $\text{Y}10'35$	1°56'52		-4078 Dec 24 j 17:31	0° $\overline{\text{Z}}$			
min. Earth dist.	-4083 Nov 16 j 18:12	26° $\text{Y}37'14$	0.66647 AU		-4077 Feb 03 j 19:40	0° \approx			
greatest brilliancy	-4083 Nov 17 j 17:00	26° $\text{Y}14'21$	-1.3m	evening set	-4077 Feb 07 j 20:18	2° $\approx52'07$			
direct	-4083 Dec 27 j 23:04	16° $\text{Y}32'09$			-4077 Mar 18 j 20:08	0° H			
	-4082 Feb 19 j 22:55	0° B							
	-4082 Apr 19 j 17:40	0° II		conjunction	-4077 Apr 04 j 00:51	10° $\text{H}56'57$	0°-25'-18		
	-4082 Jun 07 j 16:17	0° $\overline{\text{S}}$		minimum elong	-4077 Apr 04 j 02:02	10° $\text{H}58'56$	0°25'23		
	-4082 Jul 22 j 04:19	0° Q		max. Earth dist.	-4077 Apr 26 j 21:28	26° $\text{H}07'45$	2.60509 AU		
	-4082 Sep 01 j 15:59	0° M			-4077 May 02 j 19:03	0° Y			
desc. node	-4082 Sep 29 j 23:25	21° $\text{M}24'49$		asc. node	-4077 May 18 j 14:20	10° $\text{Y}17'11$			
evening set	-4082 Oct 01 j 19:04	22° $\text{M}48'38$		morning rise	-4077 May 25 j 01:22	14° $\text{Y}27'27$			
	-4082 Oct 11 j 02:40	0° $\underline{\text{A}}$			-4077 Jun 18 j 08:24	0° B			

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 33

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4077 Aug 05 j 03:46	0°♊		direct	-4072 Sep 10 j 06:20	7°♊42'35	
	-4077 Sep 23 j 09:50	0°♋			-4072 Nov 19 j 10:02	0°♋	
	-4077 Nov 15 j 02:46	0°♌		asc. node	-4071 Jan 07 j 06:44	26°♋52'31	
	-4076 Feb 01 j 08:40	0°♍			-4071 Jan 12 j 15:25	0°♌	
retrograde	-4076 Feb 11 j 20:11	0°♍38'46			-4071 Mar 03 j 20:36	0°♍	
	-4076 Feb 21 j 23:19	30°♌♌			-4071 Apr 21 j 17:01	0°♎	
opposition	-4076 Mar 16 j 13:43	24°♌03'47	3°43'25		-4071 Jun 08 j 07:12	0°♏	
greatest brilliancy	-4076 Mar 18 j 06:51	23°♌29'29	-2.2m	evening set	-4071 Jun 12 j 19:28	2°♏53'37	
min. Earth dist.	-4076 Mar 25 j 01:07	21°♌15'04	0.46999 AU	max. Earth dist.	-4071 Jul 08 j 03:42	19°♏21'07	2.61587 AU
direct	-4076 Apr 22 j 17:25	16°♌00'53			-4071 Jul 24 j 06:11	0°♐	
desc. node	-4076 May 21 j 20:10	21°♌21'24					
	-4076 Jun 11 j 06:58	0°♑		conjunction	-4071 Jul 29 j 18:17	3°♐40'37	1°11'05
	-4076 Jul 31 j 06:01	0°♒		minimum elong	-4071 Jul 29 j 18:23	3°♐40'48	1°11'17
	-4076 Sep 11 j 14:07	0°♓			-4071 Sep 06 j 07:49	0°♑	
	-4076 Oct 22 j 07:43	0°♐		morning rise	-4071 Sep 14 j 22:48	6°♑01'31	
	-4076 Dec 02 j 08:38	0°♑			-4071 Oct 18 j 13:36	0°♒	
	-4075 Jan 13 j 15:57	0°♒			-4071 Nov 28 j 07:14	0°♓	
	-4075 Feb 26 j 15:18	0°♓			-4070 Jan 07 j 01:31	0°♓	
evening set	-4075 Mar 26 j 22:45	18°♓44'43		desc. node	-4070 Jan 11 j 21:58	3°♓41'11	
asc. node	-4075 Apr 04 j 10:50	24°♓18'16			-4070 Feb 15 j 14:06	0°♐	
	-4075 Apr 13 j 04:56	0°♑			-4070 Mar 27 j 23:00	0°♑	
					-4070 May 10 j 01:10	0°♒	
conjunction	-4075 May 15 j 09:35	20°♑44'53	0°22'47		-4070 Jun 30 j 14:16	0°♓	
minimum elong	-4075 May 15 j 08:45	20°♑43'32	0°22'49	retrograde	-4070 Aug 20 j 02:25	14°♓02'58	
max. Earth dist.	-4075 May 21 j 07:12	24°♑31'36	2.66264 AU	min. Earth dist.	-4070 Sep 22 j 02:39	6°♓44'15	0.57132 AU
	-4075 May 29 j 20:45	0°♔		opposition	-4070 Sep 28 j 07:07	4°♓19'08	-2°-26'-21
morning rise	-4075 Jun 30 j 23:08	20°♔27'44		greatest brilliancy	-4070 Sep 27 j 13:33	4°♓36'19	-1.7m
	-4075 Jul 15 j 22:23	0°♕			-4070 Oct 10 j 05:33	30°♓♓	
	-4075 Aug 31 j 21:32	0°♖		direct	-4070 Nov 03 j 16:42	26°♓01'09	
	-4075 Oct 17 j 16:15	0°♗		asc. node	-4070 Nov 25 j 06:37	28°♓42'17	
	-4075 Dec 03 j 19:01	0°♘			-4070 Nov 30 j 09:01	0°♔	
	-4074 Jan 21 j 20:20	0°♙			-4069 Feb 07 j 04:20	0°♕	
	-4074 Mar 22 j 15:16	0°♚			-4069 Apr 01 j 05:43	0°♖	
desc. node	-4074 Apr 08 j 20:24	5°♚05'08			-4069 May 20 j 08:53	0°♗	
retrograde	-4074 Apr 27 j 01:42	7°♚07'22			-4069 Jul 05 j 17:42	0°♘	
opposition	-4074 May 27 j 12:22	2°♚03'51	-3°-32'-58	evening set	-4069 Jul 23 j 10:25	11°♘54'44	
greatest brilliancy	-4074 May 27 j 12:40	2°♚03'39	-2.9m	max. Earth dist.	-4069 Aug 08 j 13:12	22°♘59'38	2.51749 AU
min. Earth dist.	-4074 May 28 j 01:25	1°♚55'09	0.37751 AU		-4069 Aug 18 j 13:47	0°♙	
	-4074 Jun 04 j 11:09	30°♚♚					
direct	-4074 Jun 26 j 22:02	26°♚57'54		conjunction	-4069 Sep 11 j 18:28	17°♙16'06	0°49'14
	-4074 Jul 18 j 17:15	0°♛		minimum elong	-4069 Sep 11 j 20:19	17°♙19'28	0°49'20
	-4074 Sep 19 j 20:28	0°♜			-4069 Sep 29 j 04:27	0°♘	
	-4074 Nov 06 j 08:26	0°♝		morning rise	-4069 Nov 05 j 02:44	27°♘44'26	
	-4074 Dec 22 j 04:30	0°♞			-4069 Nov 08 j 01:44	0°♙	
	-4073 Feb 06 j 08:17	0°♟		desc. node	-4069 Nov 29 j 19:34	16°♙43'51	
asc. node	-4073 Feb 20 j 08:10	8°♟59'53			-4069 Dec 16 j 21:58	0°♚	
	-4073 Mar 25 j 05:51	0°♑			-4068 Jan 24 j 12:02	0°♜	
evening set	-4073 May 06 j 11:24	26°♑46'56			-4068 Mar 03 j 17:19	0°♝	
	-4073 May 11 j 13:12	0°♔			-4068 Apr 13 j 14:30	0°♞	
max. Earth dist.	-4073 Jun 14 j 06:05	21°♔27'04	2.66590 AU		-4068 May 27 j 13:09	0°♟	
					-4068 Jul 17 j 00:01	0°♑	
conjunction	-4073 Jun 22 j 08:35	26°♔38'29	0°58'20	retrograde	-4068 Sep 25 j 07:21	22°♑42'28	
minimum elong	-4073 Jun 22 j 07:22	26°♔36'33	0°58'28	asc. node	-4068 Oct 12 j 07:44	20°♑43'59	
	-4073 Jun 27 j 14:06	0°♒		min. Earth dist.	-4068 Nov 01 j 19:38	13°♑48'53	0.65125 AU
morning rise	-4073 Aug 06 j 14:19	25°♒58'33		opposition	-4068 Nov 04 j 09:30	12°♑46'43	0°53'16
	-4073 Aug 12 j 17:09	0°♓		greatest brilliancy	-4068 Nov 04 j 06:05	12°♑50'09	-1.4m
	-4073 Sep 26 j 13:56	0°♑		direct	-4068 Dec 13 j 17:07	3°♑24'21	
	-4073 Nov 09 j 04:32	0°♒			-4067 Mar 05 j 19:30	0°♔	
	-4073 Dec 21 j 18:45	0°♓			-4067 Apr 28 j 14:30	0°♒	
	-4072 Feb 01 j 21:05	0°♔			-4067 Jun 15 j 09:52	0°♓	
desc. node	-4072 Feb 24 j 21:43	16°♔18'18			-4067 Jul 29 j 13:52	0°♑	
	-4072 Mar 15 j 15:02	0°♜		evening set	-4067 Sep 09 j 01:50	0°♒02'40	
	-4072 May 01 j 15:29	0°♝			-4067 Sep 09 j 00:24	0°♓	
retrograde	-4072 Jul 04 j 08:36	22°♝00'43		max. Earth dist.	-4067 Oct 06 j 04:28	20°♓30'50	2.39574 AU
min. Earth dist.	-4072 Aug 01 j 00:57	16°♝50'28	0.44882 AU	desc. node	-4067 Oct 16 j 16:38	28°♓35'33	
greatest brilliancy	-4072 Aug 06 j 23:12	14°♝50'20	-2.4m		-4067 Oct 18 j 12:22	0°♔	
opposition	-4072 Aug 09 j 01:17	14°♝07'36	-6°-1'-8				

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 34

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

conjunction	-4067 Nov 06 j 20:35	15° Ω 02'35	0°-15'-6			-4062 Dec 02 j 03:09	0° Ω	
minimum elong	-4067 Nov 06 j 19:21	15° Ω 00'10	0°15'09	retrograde		-4061 Jan 20 j 04:36	11° Ω 33'33	
behind sun begin	-4067 Nov 06 j 09:18	14° Ω 40'32		opposition		-4061 Feb 24 j 13:44	4° Ω 13'38	4°45'59
behind sun end	-4067 Nov 07 j 05:24	15° Ω 19'49		greatest brilliancy		-4061 Feb 26 j 11:42	3° Ω 32'43	-1.9m
	-4067 Nov 25 j 22:13	0° \mathbb{M}		min. Earth dist.		-4061 Mar 04 j 19:16	1° Ω 18'36	0.52139 AU
	-4066 Jan 03 j 03:13	0° \mathcal{A}				-4061 Mar 08 j 16:51	30° $\mathcal{R}\mathcal{S}$	
morning rise	-4066 Jan 12 j 07:08	7° \mathcal{A} 08'34		direct		-4061 Apr 04 j 14:08	25° \mathcal{S} 16'09	
	-4066 Feb 11 j 00:29	0° \mathcal{Z}				-4061 May 02 j 07:28	0° Ω	
	-4066 Mar 23 j 10:09	0° \approx		desc. node		-4061 Jun 08 j 12:11	16° Ω 46'11	
	-4066 May 05 j 02:38	0° \mathcal{H}				-4061 Jun 30 j 15:28	0° \mathbb{M}	
	-4066 Jun 20 j 00:37	0° \mathcal{Y}				-4061 Aug 13 j 10:20	0° $\underline{\Omega}$	
	-4066 Aug 10 j 15:33	0° \mathcal{B}				-4061 Sep 22 j 20:03	0° \mathbb{M}	
asc. node	-4066 Aug 30 j 08:58	9° \mathcal{B} 49'09				-4061 Nov 01 j 11:48	0° \mathcal{A}	
retrograde	-4066 Oct 30 j 01:11	26° \mathcal{B} 44'24				-4061 Dec 11 j 17:59	0° \mathcal{Z}	
opposition	-4066 Dec 08 j 17:29	17° \mathcal{B} 14'01	3°22'09			-4060 Jan 22 j 10:31	0° \approx	
greatest brilliancy	-4066 Dec 08 j 20:05	17° \mathcal{B} 11'25	-1.3m			-4060 Mar 05 j 22:30	0° \mathcal{H}	
min. Earth dist.	-4066 Dec 09 j 22:22	16° \mathcal{B} 45'13	0.67062 AU	evening set		-4060 Mar 09 j 12:37	2° \mathcal{H} 25'10	
direct	-4065 Jan 18 j 15:51	7° \mathcal{B} 18'53				-4060 Apr 20 j 04:30	0° \mathcal{Y}	
	-4065 Apr 01 j 23:30	0° \mathbb{I}		asc. node		-4060 Apr 21 j 03:28	0° \mathcal{Y} 37'25	
	-4065 May 24 j 19:50	0° \mathcal{S}						
	-4065 Jul 09 j 10:26	0° Ω		conjunction		-4060 Apr 29 j 18:25	6° \mathcal{Y} 13'51	0°04'58
	-4065 Aug 20 j 06:35	0° \mathbb{M}		minimum elong		-4060 Apr 29 j 18:13	6° \mathcal{Y} 13'33	0°04'58
desc. node	-4065 Sep 03 j 14:19	10° \mathbb{M} 43'01		behind sun begin		-4060 Apr 28 j 22:36	5° \mathcal{Y} 41'44	
	-4065 Sep 28 j 19:07	0° $\underline{\Omega}$		behind sun end		-4060 Apr 30 j 13:50	6° \mathcal{Y} 45'20	
	-4065 Nov 06 j 03:05	0° \mathbb{M}		max. Earth dist.		-4060 May 11 j 22:07	14° \mathcal{Y} 05'22	2.64650 AU
evening set	-4065 Nov 11 j 08:45	4° \mathbb{M} 07'34				-4060 Jun 05 j 17:32	0° \mathcal{B}	
	-4065 Dec 14 j 06:47	0° \mathcal{A}		morning rise		-4060 Jun 16 j 15:30	6° \mathcal{B} 57'23	
						-4060 Jul 22 j 23:34	0° \mathbb{I}	
conjunction	-4064 Jan 15 j 23:40	25° \mathcal{A} 17'03	-1°-7'-12			-4060 Sep 08 j 14:01	0° \mathcal{S}	
minimum elong	-4064 Jan 15 j 22:51	25° \mathcal{A} 15'31	1°07'23			-4060 Oct 26 j 19:40	0° Ω	
	-4064 Jan 22 j 04:25	0° \mathcal{Z}				-4060 Dec 16 j 06:19	0° \mathbb{M}	
	-4064 Mar 02 j 14:40	0° \approx				-4059 Feb 15 j 07:38	0° $\underline{\Omega}$	
max. Earth dist.	-4064 Mar 05 j 00:00	1° \approx 43'42	2.44538 AU	retrograde		-4059 Mar 26 j 02:02	7° $\underline{\Omega}$ 59'59	
morning rise	-4064 Mar 20 j 00:58	12° \approx 29'52		desc. node		-4059 Apr 25 j 14:16	2° $\underline{\Omega}$ 50'35	
	-4064 Apr 14 j 02:40	0° \mathcal{H}		opposition		-4059 Apr 26 j 05:53	2° $\underline{\Omega}$ 39'30	0°-2'-47
	-4064 May 29 j 00:32	0° \mathcal{Y}		greatest brilliancy		-4059 Apr 10 j 15:47	6° $\underline{\Omega}$ 31'24	-2.8m
	-4064 Jul 15 j 17:30	0° \mathcal{B}		min. Earth dist.		-4059 May 01 j 17:25	1° $\underline{\Omega}$ 06'24	0.39852 AU
asc. node	-4064 Jul 17 j 08:04	0° \mathcal{B} 58'26				-4059 May 05 j 19:45	30° $\mathcal{R}\mathbb{M}$	
	-4064 Sep 05 j 22:38	0° \mathbb{I}		direct		-4059 May 28 j 22:53	26° \mathbb{M} 37'31	
	-4064 Nov 20 j 18:27	0° \mathcal{S}				-4059 Jun 20 j 19:22	0° $\underline{\Omega}$	
retrograde	-4064 Dec 05 j 06:00	1° \mathcal{S} 13'30				-4059 Aug 20 j 11:14	0° \mathbb{M}	
	-4064 Dec 19 j 01:40	30° $\mathcal{R}\mathbb{I}$				-4059 Oct 04 j 18:43	0° \mathcal{A}	
opposition	-4063 Jan 12 j 10:45	22° \mathbb{I} 31'47	4°54'41			-4059 Nov 17 j 06:21	0° \mathcal{Z}	
greatest brilliancy	-4063 Jan 13 j 11:44	22° \mathbb{I} 07'37	-1.4m			-4059 Dec 31 j 03:39	0° \approx	
min. Earth dist.	-4063 Jan 17 j 11:22	20° \mathbb{I} 35'18	0.62611 AU			-4058 Feb 14 j 04:42	0° \mathcal{H}	
direct	-4063 Feb 22 j 13:04	12° \mathbb{I} 35'01		asc. node		-4058 Mar 08 j 23:38	14° \mathcal{H} 52'03	
	-4063 Apr 23 j 22:00	0° \mathcal{S}				-4058 Apr 01 j 10:37	0° \mathcal{Y}	
	-4063 Jun 14 j 23:57	0° Ω		evening set		-4058 Apr 21 j 06:23	12° \mathcal{Y} 41'34	
desc. node	-4063 Jul 21 j 12:26	24° Ω 52'04				-4058 May 18 j 10:01	0° \mathcal{B}	
	-4063 Jul 28 j 16:14	0° \mathbb{M}		max. Earth dist.		-4058 Jun 05 j 00:03	11° \mathcal{B} 12'09	2.67116 AU
	-4063 Sep 06 j 22:05	0° $\underline{\Omega}$						
	-4063 Oct 15 j 15:31	0° \mathbb{M}		conjunction		-4058 Jun 07 j 19:48	13° \mathcal{B} 00'11	0°46'44
	-4063 Nov 23 j 03:17	0° \mathcal{A}		minimum elong		-4058 Jun 07 j 18:31	12° \mathcal{B} 58'09	0°46'50
	-4062 Jan 01 j 09:38	0° \mathcal{Z}				-4058 Jul 04 j 09:44	0° \mathbb{I}	
evening set	-4062 Jan 16 j 11:45	11° \mathcal{Z} 14'50		morning rise		-4058 Jul 23 j 05:19	12° \mathbb{I} 06'35	
	-4062 Feb 11 j 04:57	0° \approx				-4058 Aug 19 j 18:26	0° \mathcal{S}	
						-4058 Oct 04 j 04:49	0° Ω	
conjunction	-4062 Mar 15 j 23:33	23° \approx 06'46	0°-43'-47			-4058 Nov 17 j 18:34	0° \mathbb{M}	
minimum elong	-4062 Mar 16 j 01:33	23° \approx 10'13	0°43'53			-4058 Dec 31 j 19:54	0° $\underline{\Omega}$	
	-4062 Mar 25 j 23:38	0° \mathcal{H}				-4057 Feb 14 j 05:05	0° \mathbb{M}	
max. Earth dist.	-4062 Apr 15 j 12:22	13° \mathcal{H} 54'12	2.56835 AU	desc. node		-4057 Mar 13 j 15:13	17° \mathbb{M} 49'08	
morning rise	-4062 May 08 j 20:28	29° \mathcal{H} 22'14				-4057 Apr 02 j 16:36	0° \mathcal{A}	
	-4062 May 09 j 19:31	0° \mathcal{Y}		retrograde		-4057 Jun 11 j 18:43	25° \mathcal{A} 13'07	
asc. node	-4062 Jun 04 j 06:11	16° \mathcal{Y} 29'32		min. Earth dist.		-4057 Jul 08 j 08:35	20° \mathcal{A} 42'11	0.40442 AU
	-4062 Jun 25 j 11:37	0° \mathcal{B}		greatest brilliancy		-4057 Jul 13 j 03:17	19° \mathcal{A} 16'33	-2.7m
	-4062 Aug 12 j 21:48	0° \mathbb{I}		opposition		-4057 Jul 14 j 23:03	18° \mathcal{A} 43'32	-6°-29'-12
	-4062 Oct 03 j 00:17	0° \mathcal{S}		direct		-4057 Aug 14 j 12:41	13° \mathcal{A} 12'19	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 35

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4057 Oct 11 j 09:33	0°☾		behind sun begin	-4052 Oct 13 j 01:05	20°♊08'17	
	-4057 Dec 04 j 21:12	0°♊		behind sun end	-4052 Oct 14 j 02:29	20°♊56'40	
	-4056 Jan 23 j 06:54	0°♋			-4052 Oct 25 j 21:53	0°♌	
asc. node	-4056 Jan 24 j 21:37	0°♋59'38		desc. node	-4052 Nov 02 j 11:02	5°♌49'48	
	-4056 Mar 11 j 18:34	0°♍			-4052 Dec 03 j 10:54	0°♍	
	-4056 Apr 28 j 20:41	0°♎		morning rise	-4052 Dec 14 j 11:11	8°♍38'01	
evening set	-4056 May 28 j 21:46	18°♎58'19			-4051 Jan 10 j 18:21	0°♏	
	-4056 Jun 15 j 04:03	0°♐			-4051 Feb 18 j 17:11	0°☾	
max. Earth dist.	-4056 Jun 28 j 03:50	8°♐22'35	2.64159 AU		-4051 Mar 31 j 04:41	0°♊	
					-4051 May 13 j 03:23	0°♋	
conjunction	-4056 Jul 14 j 12:15	19°♐01'43	1°09'31		-4051 Jun 28 j 23:56	0°♍	
minimum elong	-4056 Jul 14 j 11:41	19°♐00'47	1°09'42		-4051 Aug 24 j 02:39	0°♎	
	-4056 Jul 31 j 03:25	0°♏		asc. node	-4051 Sep 15 j 23:31	8°♎42'48	
morning rise	-4056 Aug 29 j 11:22	19°♏43'35		retrograde	-4051 Oct 16 j 12:33	13°♎52'59	
	-4056 Sep 13 j 10:54	0°♑		opposition	-4051 Nov 25 j 11:57	4°♎09'44	2°30'30
	-4056 Oct 26 j 02:56	0°♒		greatest brilliancy	-4051 Nov 25 j 09:38	4°♎12'04	-1.3m
	-4056 Dec 06 j 09:52	0°♌		min. Earth dist.	-4051 Nov 25 j 05:15	4°♎16'27	0.67064 AU
	-4055 Jan 15 j 19:26	0°♍			-4051 Dec 06 j 06:42	30°♏♑	
desc. node	-4055 Jan 28 j 14:38	9°♍33'37		direct	-4050 Jan 04 j 23:04	24°♑24'02	
	-4055 Feb 25 j 02:00	0°♏			-4050 Feb 06 j 15:29	0°♎	
	-4055 Apr 07 j 13:59	0°☾			-4050 Apr 13 j 08:49	0°♐	
	-4055 May 23 j 12:59	0°♊			-4050 Jun 02 j 09:33	0°♏	
retrograde	-4055 Aug 03 j 13:22	26°♊12'29			-4050 Jul 17 j 06:01	0°♑	
min. Earth dist.	-4055 Sep 03 j 11:21	19°♊41'41	0.52600 AU		-4050 Aug 27 j 20:44	0°♒	
greatest brilliancy	-4055 Sep 09 j 11:42	17°♊25'24	-2.0m	desc. node	-4050 Sep 20 j 07:34	17°♒40'32	
opposition	-4055 Sep 10 j 19:52	16°♊54'58	-3°-55'-5		-4050 Oct 06 j 08:05	0°♌	
direct	-4055 Oct 15 j 16:42	9°♋14'43		evening set	-4050 Oct 15 j 21:33	7°♌25'47	
asc. node	-4055 Dec 11 j 22:12	24°♋41'13			-4050 Nov 13 j 15:56	0°♍	
	-4055 Dec 23 j 08:39	0°♋					
	-4054 Feb 17 j 09:23	0°♍		conjunction	-4050 Dec 19 j 11:17	28°♍10'19	0°-55'-48
	-4054 Apr 09 j 05:16	0°♎		minimum elong	-4050 Dec 19 j 08:10	28°♍04'13	0°55'56
	-4054 May 27 j 14:10	0°♐			-4050 Dec 21 j 19:21	0°♏	
evening set	-4054 Jul 07 j 01:36	26°♐13'59			-4049 Jan 29 j 15:53	0°☾	
	-4054 Jul 12 j 17:42	0°♏			-4049 Jan 31 j 14:39	1°☾28'46	2.39584 AU
max. Earth dist.	-4054 Jul 26 j 00:54	8°♏55'56	2.56106 AU	morning rise	-4049 Feb 24 j 21:01	19°☾38'34	
					-4049 Mar 11 j 00:30	0°♊	
conjunction	-4054 Aug 24 j 13:50	29°♏15'50	1°02'43		-4049 Apr 22 j 12:07	0°♋	
minimum elong	-4054 Aug 24 j 15:10	29°♏18'11	1°02'53		-4049 Jun 06 j 14:45	0°♍	
	-4054 Aug 25 j 15:03	0°♑			-4049 Jul 25 j 05:08	0°♎	
	-4054 Oct 06 j 10:34	0°♒		asc. node	-4049 Aug 03 j 23:46	5°♎40'35	
morning rise	-4054 Oct 14 j 07:14	5°♒47'23			-4049 Sep 19 j 06:24	0°♐	
	-4054 Nov 15 j 14:22	0°♌		retrograde	-4049 Nov 21 j 03:28	17°♐37'52	
desc. node	-4054 Dec 16 j 13:35	23°♌42'29		opposition	-4049 Dec 30 j 01:44	8°♐33'58	4°26'41
	-4054 Dec 24 j 17:18	0°♍		greatest brilliancy	-4049 Dec 30 j 16:46	8°♐19'12	-1.3m
	-4053 Feb 01 j 13:44	0°♏		min. Earth dist.	-4048 Jan 02 j 14:39	7°♐10'38	0.65134 AU
	-4053 Mar 13 j 01:45	0°☾			-4048 Jan 25 j 08:55	30°♏♑	
	-4053 Apr 23 j 10:15	0°♊		direct	-4048 Feb 09 j 07:46	28°♏32'57	
	-4053 Jun 07 j 16:04	0°♋			-4048 Feb 24 j 23:37	0°♐	
	-4053 Aug 03 j 21:21	0°♍			-4048 May 07 j 09:23	0°♏	
retrograde	-4053 Sep 12 j 10:41	8°♍44'14			-4048 Jun 24 j 13:57	0°♑	
min. Earth dist.	-4053 Oct 18 j 08:17	0°♍23'32	0.62678 AU		-4048 Aug 06 j 05:57	0°♒	
	-4053 Oct 19 j 07:53	30°♏♑		desc. node	-4048 Aug 07 j 06:21	0°♒44'43	
opposition	-4053 Oct 22 j 08:57	28°♏46'51	0°-18'-14		-4048 Sep 15 j 02:07	0°♌	
greatest brilliancy	-4053 Oct 22 j 07:26	28°♏48'23	-1.5m		-4048 Oct 23 j 13:52	0°♍	
asc. node	-4053 Oct 29 j 23:08	25°♏49'57			-4048 Nov 30 j 20:53	0°♏	
direct	-4053 Nov 29 j 16:58	19°♏45'11		evening set	-4048 Dec 22 j 15:46	16°♏50'56	
	-4052 Jan 14 j 13:32	0°♍			-4047 Jan 08 j 22:19	0°☾	
	-4052 Mar 16 j 11:07	0°♎			-4047 Feb 18 j 12:36	0°♊	
	-4052 May 06 j 17:52	0°♐					
	-4052 Jun 22 j 19:51	0°♏		conjunction	-4047 Feb 22 j 17:28	3°♊01'36	0°-59'-3
	-4052 Aug 05 j 19:26	0°♑		minimum elong	-4047 Feb 22 j 19:33	3°♊05'20	0°59'13
evening set	-4052 Aug 19 j 16:48	9°♑51'59		max. Earth dist.	-4047 Apr 02 j 06:35	0°♋05'50	2.52445 AU
max. Earth dist.	-4052 Sep 04 j 22:53	21°♑38'46	2.44189 AU		-4047 Apr 02 j 03:11	0°♋	
	-4052 Sep 16 j 06:56	0°♒		morning rise	-4047 Apr 21 j 04:28	12°♋56'38	
					-4047 May 16 j 21:43	0°♍	
conjunction	-4052 Oct 13 j 12:50	20°♒30'38	0°14'03	asc. node	-4047 Jun 20 j 21:57	22°♍31'10	
minimum elong	-4052 Oct 13 j 13:47	20°♒32'28	0°14'05		-4047 Jul 02 j 19:28	0°♎	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 36

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4047 Aug 21 j 04:00	0°Ⅱ				-4042 Oct 29 j 08:12	0°ㄣ		
	-4047 Oct 14 j 11:44	0°ㄣ				-4042 Dec 15 j 23:19	0°≈		
retrograde	-4047 Dec 31 j 15:42	24°ㄣ51'05				-4041 Jan 31 j 23:50	0°Ⅰ		
opposition	-4046 Feb 06 j 08:32	16°ㄣ53'44	5°07'54	asc. node		-4041 Feb 10 j 13:40	6°Ⅰ05'21		
greatest brilliancy	-4046 Feb 08 j 00:53	16°ㄣ16'14	-1.7m			-4041 Mar 20 j 08:17	0°Ⅱ		
min. Earth dist.	-4046 Feb 13 j 13:11	14°ㄣ13'47	0.56885 AU			-4041 May 06 j 21:09	0°Ⅲ		
direct	-4046 Mar 18 j 13:54	7°ㄣ21'41		evening set		-4041 May 15 j 01:43	5°Ⅲ10'57		
	-4046 May 26 j 00:29	0°Ⅲ		max. Earth dist.		-4041 Jun 19 j 17:20	27°Ⅲ53'46	2.65940 AU	
desc. node	-4046 Jun 25 j 06:12	18°Ⅲ12'41				-4041 Jun 22 j 23:57	0°Ⅱ		
	-4046 Jul 12 j 21:54	0°Ⅲ							
	-4046 Aug 23 j 13:45	0°Ⅲ		conjunction		-4041 Jun 30 j 17:53	4°Ⅱ59'25	1°03'33	
	-4046 Oct 02 j 00:34	0°Ⅲ		minimum elong		-4041 Jun 30 j 16:51	4°Ⅱ57'44	1°03'42	
	-4046 Nov 10 j 01:00	0°Ⅲ				-4041 Aug 08 j 01:26	0°ㄣ		
	-4046 Dec 19 j 18:34	0°ㄣ		morning rise		-4041 Aug 15 j 02:23	4°ㄣ39'48		
	-4045 Jan 30 j 00:05	0°≈				-4041 Sep 21 j 17:16	0°Ⅲ		
evening set	-4045 Feb 19 j 12:52	14°≈27'12				-4041 Nov 03 j 23:04	0°Ⅲ		
	-4045 Mar 14 j 03:13	0°Ⅰ				-4041 Dec 16 j 00:35	0°Ⅲ		
						-4040 Jan 26 j 08:56	0°Ⅲ		
conjunction	-4045 Apr 14 j 03:55	20°Ⅰ48'13	0°-14'-7	desc. node		-4040 Feb 15 j 08:00	14°Ⅲ29'41		
minimum elong	-4045 Apr 14 j 04:33	20°Ⅰ49'17	0°14'09			-4040 Mar 07 j 22:02	0°Ⅲ		
behind sun begin	-4045 Apr 13 j 19:03	20°Ⅰ33'34				-4040 Apr 20 j 19:35	0°ㄣ		
behind sun end	-4045 Apr 14 j 14:03	21°Ⅰ04'59				-4040 Jun 16 j 14:47	0°≈		
	-4045 Apr 28 j 03:25	0°Ⅱ		retrograde		-4040 Jul 16 j 01:04	5°≈38'40		
max. Earth dist.	-4045 May 03 j 02:41	3°Ⅱ14'44	2.62208 AU			-4040 Aug 13 j 19:55	30°Ⅲ		
asc. node	-4045 May 08 j 18:42	6°Ⅱ56'05		min. Earth dist.		-4040 Aug 13 j 19:22	0°≈00'28	0.47620 AU	
morning rise	-4045 Jun 02 j 21:32	23°Ⅱ07'50		greatest brilliancy		-4040 Aug 19 j 22:43	27°Ⅲ49'35	-2.2m	
	-4045 Jun 13 j 15:38	0°Ⅲ		opposition		-4040 Aug 21 j 20:41	27°Ⅲ08'31	-5°-21'-4	
	-4045 Jul 31 j 04:52	0°Ⅲ		direct		-4040 Sep 23 j 23:58	20°Ⅲ14'49		
	-4045 Sep 17 j 17:14	0°ㄣ				-4040 Nov 06 j 02:40	0°≈		
	-4045 Nov 07 j 06:31	0°Ⅲ		asc. node		-4040 Dec 28 j 12:42	25°≈30'21		
	-4044 Jan 04 j 13:47	0°Ⅲ				-4039 Jan 05 j 15:50	0°Ⅰ		
retrograde	-4044 Feb 26 j 06:57	13°Ⅲ17'21				-4039 Feb 26 j 08:20	0°Ⅱ		
opposition	-4044 Mar 30 j 01:28	7°Ⅲ09'40	2°41'22			-4039 Apr 16 j 18:54	0°Ⅲ		
greatest brilliancy	-4044 Mar 31 j 07:51	6°Ⅲ45'30	-2.4m			-4039 Jun 03 j 15:12	0°Ⅲ		
min. Earth dist.	-4044 Apr 07 j 00:40	4°Ⅲ38'32	0.44186 AU	evening set		-4039 Jun 21 j 12:06	11°Ⅲ29'55		
	-4044 Apr 29 j 04:01	30°Ⅲ		max. Earth dist.		-4039 Jul 14 j 08:38	26°Ⅲ28'52	2.59814 AU	
direct	-4044 May 04 j 18:54	29°Ⅲ46'37				-4039 Jul 19 j 15:44	0°ㄣ		
	-4044 May 10 j 10:28	0°Ⅲ							
desc. node	-4044 May 12 j 06:04	0°Ⅲ09'52		conjunction		-4039 Aug 07 j 20:45	12°ㄣ55'32	1°09'41	
	-4044 Jul 21 j 18:53	0°Ⅲ		minimum elong		-4039 Aug 07 j 21:18	12°ㄣ56'28	1°09'52	
	-4044 Sep 04 j 09:43	0°Ⅲ				-4039 Sep 01 j 15:56	0°Ⅲ		
	-4044 Oct 16 j 03:29	0°Ⅲ		morning rise		-4039 Sep 25 j 01:49	16°Ⅲ31'52		
	-4044 Nov 26 j 19:14	0°ㄣ				-4039 Oct 13 j 17:58	0°Ⅲ		
	-4043 Jan 08 j 12:31	0°≈				-4039 Nov 23 j 06:29	0°Ⅲ		
	-4043 Feb 21 j 18:50	0°Ⅰ				-4038 Jan 01 j 18:41	0°Ⅲ		
asc. node	-4043 Mar 25 j 16:09	20°Ⅰ59'59		desc. node		-4038 Jan 02 j 06:27	0°Ⅲ22'29		
evening set	-4043 Apr 05 j 09:50	27°Ⅰ58'45				-4038 Feb 10 j 00:30	0°Ⅲ		
	-4043 Apr 08 j 12:44	0°Ⅱ				-4038 Mar 21 j 23:42	0°ㄣ		
						-4038 May 03 j 04:45	0°≈		
conjunction	-4043 May 24 j 01:47	29°Ⅱ14'27	0°32'17			-4038 Jun 20 j 04:14	0°Ⅰ		
minimum elong	-4043 May 24 j 00:42	29°Ⅱ12'43	0°32'21	retrograde		-4038 Aug 28 j 21:24	23°Ⅰ42'22		
	-4043 May 25 j 06:19	0°Ⅲ		min. Earth dist.		-4038 Oct 01 j 23:37	15°Ⅰ59'59	0.59335 AU	
max. Earth dist.	-4043 May 26 j 18:26	0°Ⅲ57'38	2.66791 AU	opposition		-4038 Oct 07 j 10:10	13°Ⅰ51'00	-1°-37'-30	
morning rise	-4043 Jul 09 j 02:29	28°Ⅲ36'32		greatest brilliancy		-4038 Oct 06 j 23:41	14°Ⅰ01'21	-1.6m	
	-4043 Jul 11 j 06:43	0°Ⅲ		direct		-4038 Nov 13 j 13:50	5°Ⅰ15'37		
	-4043 Aug 26 j 23:50	0°ㄣ		asc. node		-4038 Nov 15 j 13:33	5°Ⅰ17'07		
	-4043 Oct 12 j 05:06	0°Ⅲ				-4037 Jan 30 j 11:31	0°Ⅱ		
	-4043 Nov 27 j 04:45	0°Ⅲ				-4037 Mar 26 j 15:18	0°Ⅲ		
	-4042 Jan 12 j 18:13	0°Ⅲ				-4037 May 15 j 10:21	0°Ⅲ		
	-4042 Mar 03 j 14:03	0°Ⅲ				-4037 Jul 01 j 01:05	0°ㄣ		
desc. node	-4042 Mar 30 j 07:04	13°Ⅲ30'11		evening set		-4037 Aug 02 j 05:50	21°ㄣ49'49		
retrograde	-4042 May 14 j 13:48	24°Ⅲ59'31				-4037 Aug 13 j 22:45	0°Ⅲ		
min. Earth dist.	-4042 Jun 12 j 01:33	20°Ⅲ21'59	0.37895 AU	max. Earth dist.		-4037 Aug 17 j 08:49	2°Ⅲ24'37	2.49116 AU	
opposition	-4042 Jun 14 j 15:26	19°Ⅲ40'04	-5°-11'-36						
greatest brilliancy	-4042 Jun 13 j 23:16	19°Ⅲ51'01	-2.8m	conjunction		-4037 Sep 22 j 22:51	28°Ⅲ50'33	0°38'22	
direct	-4042 Jul 14 j 11:00	14°Ⅲ40'10		minimum elong		-4037 Sep 23 j 00:43	28°Ⅲ54'00	0°38'27	
	-4042 Sep 06 j 05:49	0°Ⅲ				-4037 Sep 24 j 12:28	0°Ⅲ		

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4037 Nov 03 j 07:27	0°♊			-4032 Oct 30 j 17:22	0°♉		
morning rise	-4037 Nov 18 j 19:54	11°♊57'33		retrograde	-4032 Dec 14 j 09:08	9°♉47'06		
desc. node	-4037 Nov 20 j 04:56	13°♊01'29		opposition	-4031 Jan 21 j 02:53	1°♉19'33	5°04'26	
	-4037 Dec 12 j 00:41	0°♋		greatest brilliancy	-4031 Jan 22 j 09:42	0°♉50'05	-1.5m	
	-4036 Jan 19 j 11:44	0°♈			-4031 Jan 24 j 14:02	30°♋II		
	-4036 Feb 27 j 13:43	0°♏		min. Earth dist.	-4031 Jan 26 j 23:17	29°♋05'36	0.60825 AU	
	-4036 Apr 08 j 05:35	0°♍		direct	-4031 Mar 03 j 00:51	21°♋II28'19		
	-4036 May 21 j 16:00	0°♌			-4031 Apr 11 j 17:07	0°♉		
	-4036 Jul 09 j 05:50	0°♎			-4031 Jun 08 j 05:30	0°♏		
	-4036 Sep 21 j 11:44	0°♐		desc. node	-4031 Jul 11 j 22:25	22°♏15'30		
asc. node	-4036 Oct 02 j 14:12	0°♑50'38			-4031 Jul 22 j 22:36	0°♐		
retrograde	-4036 Oct 03 j 02:36	0°♑50'45			-4031 Sep 01 j 14:01	0°♊		
	-4036 Oct 14 j 07:57	30°♐♎			-4031 Oct 10 j 12:16	0°♋		
min. Earth dist.	-4036 Nov 10 j 10:53	21°♎♑40'37	0.66096 AU		-4031 Nov 18 j 03:26	0°♈		
opposition	-4036 Nov 12 j 04:56	20°♎♑58'23	1°31'16		-4031 Dec 27 j 12:44	0°♏		
greatest brilliancy	-4036 Nov 12 j 00:47	21°♎♑02'33	-1.3m	evening set	-4030 Jan 29 j 11:06	24°♏15'22		
direct	-4036 Dec 21 j 23:36	11°♎♑26'27			-4030 Feb 06 j 10:29	0°♍		
	-4035 Feb 25 j 12:28	0°♐			-4030 Mar 21 j 07:07	0°♌		
	-4035 Apr 22 j 21:22	0°♋						
	-4035 Jun 10 j 09:08	0°♉		conjunction	-4030 Mar 27 j 01:52	3°♌56'28	0°-33'-20	
	-4035 Jul 24 j 19:04	0°♏		minimum elong	-4030 Mar 27 j 03:26	3°♌59'08	0°33'25	
	-4035 Sep 04 j 07:29	0°♐		max. Earth dist.	-4030 Apr 22 j 06:33	21°♌31'06	2.58964 AU	
evening set	-4035 Sep 21 j 13:56	12°♐♎58'01			-4030 May 05 j 03:19	0°♎		
desc. node	-4035 Oct 07 j 02:46	24°♐♎50'00		morning rise	-4030 May 18 j 07:01	8°♎♑34'38		
	-4035 Oct 13 j 19:30	0°♊		asc. node	-4030 May 25 j 11:46	13°♎♑14'09		
max. Earth dist.	-4035 Nov 07 j 05:12	19°♊01'17	2.37840 AU		-4030 Jun 20 j 16:45	0°♐		
					-4030 Aug 07 j 17:06	0°♋		
conjunction	-4035 Nov 21 j 16:31	0°♋23'47	0°-31'-41		-4030 Sep 26 j 14:46	0°♉		
minimum elong	-4035 Nov 21 j 13:57	0°♋18'45	0°31'45		-4030 Nov 20 j 12:46	0°♏		
	-4035 Nov 21 j 04:26	0°♋		retrograde	-4029 Feb 01 j 14:04	22°♏27'49		
	-4035 Dec 29 j 08:16	0°♈		opposition	-4029 Mar 08 j 01:44	15°♏31'43	4°15'55	
morning rise	-4034 Jan 28 j 13:56	23°♈♐26'05		greatest brilliancy	-4029 Mar 09 j 22:40	14°♏52'59	-2.1m	
	-4034 Feb 06 j 04:21	0°♏		min. Earth dist.	-4029 Mar 16 j 13:22	12°♏36'58	0.49331 AU	
	-4034 Mar 18 j 12:12	0°♍		direct	-4029 Apr 15 j 03:55	7°♏01'16		
	-4034 Apr 30 j 01:08	0°♌		desc. node	-4029 May 29 j 23:04	18°♏34'41		
	-4034 Jun 14 j 12:49	0°♎			-4029 Jun 20 j 23:18	0°♐		
	-4034 Aug 03 j 15:21	0°♐			-4029 Aug 06 j 09:10	0°♊		
asc. node	-4034 Aug 20 j 13:45	9°♐06'32			-4029 Sep 16 j 17:07	0°♋		
	-4034 Oct 08 j 23:17	0°♋			-4029 Oct 26 j 21:09	0°♈		
retrograde	-4034 Nov 06 j 23:11	4°♋II35'34			-4029 Dec 06 j 12:03	0°♏		
	-4034 Dec 03 j 15:55	30°♐♋			-4028 Jan 17 j 11:00	0°♍		
opposition	-4034 Dec 16 j 10:23	25°♋13'42	3°48'27		-4028 Mar 01 j 03:55	0°♌		
greatest brilliancy	-4034 Dec 16 j 16:54	25°♋07'14	-1.3m	evening set	-4028 Mar 19 j 15:27	12°♌20'26		
min. Earth dist.	-4034 Dec 18 j 11:28	24°♋25'02	0.66655 AU	asc. node	-4028 Apr 11 j 08:10	27°♌15'48		
direct	-4033 Jan 26 j 13:16	15°♋15'00			-4028 Apr 15 j 12:56	0°♎		
	-4033 Mar 23 j 19:02	0°♋						
	-4033 May 18 j 19:43	0°♉		conjunction	-4028 May 08 j 19:48	15°♎♑04'08	0°15'30	
	-4033 Jul 04 j 04:26	0°♏		minimum elong	-4028 May 08 j 19:12	15°♎♑03'09	0°15'31	
	-4033 Aug 15 j 07:06	0°♐		behind sun begin	-4028 May 08 j 15:50	14°♎♑57'44		
desc. node	-4033 Aug 24 j 23:57	7°♐♎12'34		behind sun end	-4028 May 08 j 22:34	15°♎♑08'35		
	-4033 Sep 23 j 22:24	0°♊		max. Earth dist.	-4028 May 17 j 11:52	20°♎♑38'22	2.65643 AU	
	-4033 Nov 01 j 07:32	0°♋			-4028 Jun 01 j 02:50	0°♐		
greatest brilliancy	-4033 Nov 25 j 04:22	18°♋♌46'53	1.2m	morning rise	-4028 Jun 24 j 21:59	15°♐10'05		
evening set	-4033 Nov 26 j 17:20	19°♋59'29			-4028 Jul 18 j 05:57	0°♋		
	-4033 Dec 09 j 12:01	0°♈			-4028 Sep 03 j 11:08	0°♉		
	-4032 Jan 17 j 10:18	0°♏			-4028 Oct 20 j 19:30	0°♏		
					-4028 Dec 08 j 02:33	0°♐		
conjunction	-4032 Jan 30 j 16:10	9°♏58'27	-1°-7'-23		-4027 Jan 29 j 06:02	0°♊		
minimum elong	-4032 Jan 30 j 16:51	9°♏59'43	1°07'34	retrograde	-4027 Apr 13 j 00:19	24°♊21'12		
	-4032 Feb 26 j 20:50	0°♍		desc. node	-4027 Apr 15 j 23:26	24°♊17'52		
max. Earth dist.	-4032 Mar 16 j 19:41	13°♍♌34'35	2.47421 AU	opposition	-4027 May 13 j 11:50	19°♊16'27	-2°-1'-43	
morning rise	-4032 Apr 01 j 09:29	24°♍♌30'05		greatest brilliancy	-4027 May 13 j 18:07	19°♊12'12	-2.8m	
	-4032 Apr 09 j 08:25	0°♌		min. Earth dist.	-4027 May 16 j 11:44	18°♊27'50	0.38341 AU	
	-4032 May 24 j 03:16	0°♎		direct	-4027 Jun 13 j 18:13	13°♊51'36		
asc. node	-4032 Jul 07 j 13:26	28°♎♑13'25			-4027 Aug 06 j 20:55	0°♋		
	-4032 Jul 10 j 10:33	0°♐			-4027 Sep 26 j 10:40	0°♈		
	-4032 Aug 30 j 06:31	0°♋			-4027 Nov 10 j 17:24	0°♏		

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4027 Dec 25 j 12:48	0°≈			-4022 Oct 01 j 18:04	0°ྎ		
	-4026 Feb 09 j 02:46	0°ཁ		morning rise	-4022 Oct 26 j 06:35	18°ྎ15'02		
asc. node	-4026 Feb 27 j 05:34	11°ཁ44'34			-4022 Nov 10 j 18:59	0° <u>འ</u>		
	-4026 Mar 27 j 16:07	0°ཡ		desc. node	-4022 Dec 06 j 23:20	20° <u>འ</u> 05'48		
evening set	-4026 Apr 30 j 00:56	21°ཡ14'51			-4022 Dec 19 j 18:24	0°མ		
	-4026 May 13 j 19:30	0°ཪ			-4021 Jan 27 j 10:55	0° <u>ཨ</u>		
max. Earth dist.	-4026 Jun 10 j 09:05	17°ཪ32'56	2.66931 AU		-4021 Mar 07 j 18:12	0° <u>ཅ</u>		
					-4021 Apr 17 j 18:03	0°≈		
conjunction	-4026 Jun 16 j 04:00	21°ཪ14'48	0°53'51		-4021 Jun 01 j 01:23	0°ཁ		
minimum elong	-4026 Jun 16 j 02:44	21°ཪ12'47	0°53'57		-4021 Jul 23 j 06:02	0°ཡ		
	-4026 Jun 29 j 19:58	0°II		retrograde	-4021 Sep 20 j 12:01	17°ཡ18'18		
morning rise	-4026 Jul 31 j 10:03	20°II25'07		asc. node	-4021 Oct 20 j 04:31	11°ཡ24'28		
	-4026 Aug 15 j 01:46	0° <u>ཐ</u>		min. Earth dist.	-4021 Oct 27 j 07:41	8°ཡ38'39	0.64142 AU	
	-4026 Sep 29 j 04:50	0°Omega		opposition	-4021 Oct 30 j 12:52	7°ཡ21'12	0°24'22	
	-4026 Nov 12 j 05:10	0°ྎ		greatest brilliancy	-4021 Oct 30 j 10:55	7°ཡ23'09	-1.4m	
	-4026 Dec 25 j 09:25	0° <u>འ</u>			-4021 Nov 21 j 11:33	30°རཁ		
desc. node	-4025 Feb 06 j 07:18	0°མ		direct	-4021 Dec 08 j 10:32	28°ཁ07'23		
	-4025 Mar 04 j 00:25	17°མ41'40			-4021 Dec 26 j 12:08	0°ཡ		
	-4025 Mar 22 j 11:27	0° <u>ཨ</u>			-4020 Mar 09 j 18:08	0°ཪ		
	-4025 May 13 j 09:44	0° <u>ཅ</u>			-4020 May 01 j 10:10	0°II		
retrograde	-4025 Jun 25 j 15:09	11° <u>ཅ</u> 18'55			-4020 Jun 17 j 23:04	0° <u>ཐ</u>		
min. Earth dist.	-4025 Jul 22 j 15:35	6° <u>ཅ</u> 29'02	0.42766 AU		-4020 Aug 01 j 02:32	0°Omega		
greatest brilliancy	-4025 Jul 28 j 05:00	4° <u>ཅ</u> 41'50	-2.5m	evening set	-4020 Aug 30 j 23:29	21°Omega25'42		
opposition	-4025 Jul 30 j 06:54	4° <u>ཅ</u> 01'15	-6°-22'-37		-4020 Sep 11 j 14:32	0°ྎ		
	-4025 Aug 13 j 10:20	30°ར <u>ཨ</u>		max. Earth dist.	-4020 Sep 20 j 06:20	6°ྎ27'30	2.41519 AU	
direct	-4025 Aug 30 j 17:30	28° <u>ཨ</u> 00'42			-4020 Oct 21 j 04:35	0° <u>འ</u>		
	-4025 Sep 17 j 14:02	0° <u>ཅ</u>		desc. node	-4020 Oct 23 j 20:10	2° <u>འ</u> 02'45		
	-4025 Nov 26 j 13:03	0°≈						
asc. node	-4024 Jan 15 j 04:10	28°≈46'20		conjunction	-4020 Oct 26 j 21:59	4° <u>འ</u> 25'31	0°-2'-13	
	-4024 Jan 17 j 05:22	0°ཁ		minimum elong	-4020 Oct 26 j 21:50	4° <u>འ</u> 25'14	0°02'14	
	-4024 Mar 06 j 14:11	0°ཡ		behind sun begin	-4020 Oct 25 j 20:20	3° <u>འ</u> 35'53		
	-4024 Apr 24 j 02:10	0°ཪ		behind sun end	-4020 Oct 27 j 23:20	5° <u>འ</u> 14'37		
evening set	-4024 Jun 06 j 10:07	27°ཪ20'38			-4020 Nov 28 j 16:03	0°མ		
	-4024 Jun 10 j 13:45	0°II		morning rise	-4020 Dec 30 j 13:37	25°མ02'28		
max. Earth dist.	-4024 Jul 03 j 23:04	15°II07'01	2.62844 AU		-4019 Jan 05 j 21:50	0° <u>ཨ</u>		
					-4019 Feb 13 j 19:06	0° <u>ཅ</u>		
conjunction	-4024 Jul 23 j 03:33	27°II43'48	1°11'00		-4019 Mar 26 j 04:10	0°≈		
minimum elong	-4024 Jul 23 j 03:20	27°II43'28	1°11'11		-4019 May 07 j 21:18	0°ཁ		
	-4024 Jul 26 j 13:37	0° <u>ཐ</u>			-4019 Jun 23 j 01:07	0°ཡ		
morning rise	-4024 Sep 07 j 16:50	29° <u>ཐ</u> 14'58			-4019 Aug 14 j 22:38	0°ཪ		
	-4024 Sep 08 j 18:51	0°Omega		asc. node	-4019 Sep 06 j 05:43	10°ཪ15'51		
	-4024 Oct 21 j 05:47	0°ྎ		retrograde	-4019 Oct 24 j 06:48	21°ཪ44'05		
	-4024 Dec 01 j 05:41	0° <u>འ</u>		opposition	-4019 Dec 03 j 02:53	12°ཪ07'39	3°01'31	
desc. node								

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 39

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

retrograde	-4017 Nov 29 j 16:14	25° II 48'05			-4011 Jan 03 j 04:54	0° \approx	
opposition	-4016 Jan 07 j 05:35	16° II 56'01	4°44'06		-4011 Feb 16 j 20:04	0° H	
greatest brilliancy	-4016 Jan 08 j 02:06	16° II 36'02	-1.4m	asc. node	-4011 Mar 15 j 21:01	17° H 44'03	
min. Earth dist.	-4016 Jan 11 j 14:50	15° II 13'38	0.63858 AU		-4011 Apr 03 j 19:35	0° Y	
direct	-4016 Feb 17 j 10:45	6° II 56'23		evening set	-4011 Apr 14 j 14:26	6° Y 56'21	
	-4016 Apr 29 j 10:22	0° S			-4011 May 20 j 16:00	0° B	
	-4016 Jun 18 j 15:17	0° Q					
desc. node	-4016 Jul 28 j 15:55	27° Q 39'43		conjunction	-4011 Jun 01 j 14:07	7° B 36'07	0°41'00
	-4016 Jul 31 j 21:26	0° M		minimum elong	-4011 Jun 01 j 12:53	7° B 34'09	0°41'05
	-4016 Sep 09 j 23:46	0° A		max. Earth dist.	-4011 Jun 01 j 03:23	7° B 19'00	2.67083 AU
	-4016 Oct 18 j 14:46	0° M			-4011 Jul 06 j 15:53	0° II	
	-4016 Nov 25 j 23:55	0° A		morning rise	-4011 Jul 17 j 04:55	6° II 45'39	
	-4015 Jan 04 j 03:12	0° S			-4011 Aug 22 j 04:25	0° S	
evening set	-4015 Jan 05 j 23:39	1° S 23'43			-4011 Oct 06 j 23:02	0° Q	
	-4015 Feb 13 j 18:54	0° \approx			-4011 Nov 21 j 02:26	0° M	
					-4010 Jan 05 j 02:15	0° A	
conjunction	-4015 Mar 07 j 02:07	15° \approx 10'13	0°-50'-51		-4010 Feb 20 j 03:55	0° M	
minimum elong	-4015 Mar 07 j 04:17	15° \approx 14'02	0°50'59	desc. node	-4010 Mar 20 j 17:54	17° M 17'05	
	-4015 Mar 28 j 10:18	0° H			-4010 Apr 13 j 22:20	0° A	
max. Earth dist.	-4015 Apr 10 j 03:01	8° H 39'18	2.54949 AU	retrograde	-4010 May 31 j 02:12	12° A 42'06	
morning rise	-4015 May 01 j 11:30	22° H 57'09		min. Earth dist.	-4010 Jun 27 j 00:42	8° A 15'59	0.38980 AU
	-4015 May 12 j 04:08	0° Y		greatest brilliancy	-4010 Jun 30 j 18:16	7° A 12'40	-2.8m
asc. node	-4015 Jun 11 j 03:31	19° Y 23'20		opposition	-4010 Jul 02 j 03:46	6° A 48'50	-6°-11'-45
	-4015 Jun 27 j 21:18	0° B		direct	-4010 Aug 01 j 03:52	1° A 36'49	
	-4015 Aug 15 j 14:52	0° II			-4010 Oct 19 j 15:33	0° S	
	-4015 Oct 06 j 18:48	0° S			-4010 Dec 09 j 05:52	0° \approx	
	-4015 Dec 13 j 06:28	0° Q			-4009 Jan 26 j 10:16	0° H	
retrograde	-4014 Jan 11 j 11:14	4° Q 34'30		asc. node	-4009 Jan 31 j 18:41	3° H 20'53	
	-4014 Feb 07 j 14:57	30° R S			-4009 Mar 15 j 08:30	0° Y	
opposition	-4014 Feb 16 j 11:01	26° S 57'04	4°58'42		-4009 May 02 j 04:31	0° B	
greatest brilliancy	-4014 Feb 18 j 07:18	26° S 16'48	-1.8m	evening set	-4009 May 23 j 14:45	13° B 32'15	
min. Earth dist.	-4014 Feb 24 j 06:55	24° S 06'44	0.54327 AU		-4009 Jun 18 j 10:06	0° II	
direct	-4014 Mar 28 j 02:15	17° S 41'48		max. Earth dist.	-4009 Jun 25 j 06:15	4° II 23'59	2.65061 AU
	-4014 May 14 j 10:16	0° Q					
desc. node	-4014 Jun 15 j 14:56	17° Q 16'23		conjunction	-4009 Jul 09 j 04:17	13° II 24'44	1°07'31
	-4014 Jul 05 j 17:30	0° M		minimum elong	-4009 Jul 09 j 03:30	13° II 23'27	1°07'39
	-4014 Aug 17 j 10:58	0° A			-4009 Aug 03 j 11:00	0° S	
	-4014 Sep 26 j 09:37	0° M		morning rise	-4009 Aug 23 j 18:55	13° S 34'19	
	-4014 Nov 04 j 17:30	0° A			-4009 Sep 16 j 22:53	0° Q	
	-4014 Dec 14 j 16:59	0° S			-4009 Oct 29 j 21:21	0° M	
	-4013 Jan 25 j 03:13	0° \approx			-4009 Dec 10 j 12:32	0° A	
evening set	-4013 Mar 02 j 13:43	25° \approx 20'40			-4008 Jan 20 j 07:23	0° M	
	-4013 Mar 09 j 09:56	0° H		desc. node	-4008 Feb 05 j 17:40	12° M 08'26	
					-4008 Mar 01 j 00:59	0° A	
conjunction	-4013 Apr 23 j 19:07	0° Y 11'25	0°-3'-2		-4008 Apr 12 j 07:12	0° S	
minimum elong	-4013 Apr 23 j 19:16	0° Y 11'40	0°03'03		-4008 May 30 j 15:52	0° \approx	
behind sun begin	-4013 Apr 22 j 22:45	29° H 38'07		retrograde	-4008 Jul 26 j 21:16	18° \approx 07'47	
behind sun end	-4013 Apr 24 j 15:48	0° Y 45'12		min. Earth dist.	-4008 Aug 25 j 19:30	12° \approx 00'41	0.50400 AU
	-4013 Apr 23 j 12:08	0° Y		greatest brilliancy	-4008 Aug 31 j 23:30	9° \approx 44'23	-2.1m
asc. node	-4013 Apr 29 j 00:54	3° Y 36'39		opposition	-4008 Sep 02 j 14:06	9° \approx 08'41	-4°-33'-11
max. Earth dist.	-4013 May 08 j 23:52	10° Y 04'34	2.63661 AU	direct	-4008 Oct 06 j 17:18	1° \approx 48'10	
	-4013 Jun 09 j 00:00	0° B		asc. node	-4008 Dec 18 j 18:52	24° \approx 55'29	
morning rise	-4013 Jun 11 j 10:23	1° B 33'08			-4008 Dec 28 j 17:48	0° H	
	-4013 Jul 26 j 08:24	0° II			-4007 Feb 20 j 13:57	0° Y	
	-4013 Sep 12 j 07:20	0° S			-4007 Apr 11 j 18:38	0° B	
	-4013 Oct 31 j 09:27	0° Q			-4007 May 29 j 22:29	0° II	
	-4013 Dec 23 j 04:35	0° M		evening set	-4007 Jun 30 j 08:16	20° II 16'18	
retrograde	-4012 Mar 12 j 22:43	27° M 06'20			-4007 Jul 15 j 01:40	0° S	
opposition	-4012 Apr 13 j 19:44	21° M 26'06	1°16'57	max. Earth dist.	-4007 Jul 20 j 22:59	3° S 55'56	2.57859 AU
greatest brilliancy	-4012 Apr 14 j 09:37	21° M 15'42	-2.6m				
min. Earth dist.	-4012 Apr 20 j 17:55	19° M 22'33	0.41599 AU	conjunction	-4007 Aug 17 j 05:59	22° S 29'33	1°06'25
desc. node	-4012 May 02 j 16:39	16° M 22'19		minimum elong	-4007 Aug 17 j 07:00	22° S 31'17	1°06'35
direct	-4012 May 17 j 21:26	14° M 47'57			-4007 Aug 28 j 01:27	0° Q	
	-4012 Jul 08 j 14:08	0° A		morning rise	-4007 Oct 05 j 17:08	27° Q 34'57	
	-4012 Aug 27 j 02:02	0° M			-4007 Oct 09 j 00:41	0° M	
	-4012 Oct 09 j 09:56	0° A			-4007 Nov 18 j 08:52	0° A	
	-4012 Nov 20 j 22:18	0° S		desc. node	-4007 Dec 23 j 16:45	26° A 56'58	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 40

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-4007 Dec 27 j 16:00	0°♄		min. Earth dist.	-4002 Dec 27 j 02:38	2°♄08'11	0.65939 AU
	-4006 Feb 04 j 15:57	0°♂			-4001 Jan 01 j 15:29	30°♄	
	-4006 Mar 16 j 07:34	0°♂		direct	-4001 Feb 03 j 10:48	23°♂15'49	
	-4006 Apr 26 j 21:58	0°≈			-4001 Mar 11 j 04:37	0°♄	
	-4006 Jun 11 j 22:30	0°♂			-4001 May 12 j 08:40	0°♂	
	-4006 Aug 15 j 19:13	0°♂			-4001 Jun 28 j 18:07	0°♄	
retrograde	-4006 Sep 06 j 09:21	2°♂54'29			-4001 Aug 10 j 05:06	0°♄	
	-4006 Sep 26 j 18:13	30°♄		desc. node	-4001 Aug 15 j 09:32	3°♄49'21	
min. Earth dist.	-4006 Oct 11 j 12:09	24°♂49'50	0.61294 AU		-4001 Sep 18 j 23:42	0°♄	
opposition	-4006 Oct 16 j 03:39	22°♂58'45	0°-50'-34		-4001 Oct 27 j 10:24	0°♄	
greatest brilliancy	-4006 Oct 15 j 22:55	23°♂03'29	-1.6m		-4001 Dec 04 j 15:46	0°♂	
asc. node	-4006 Nov 05 j 19:40	16°♂04'36		evening set	-4001 Dec 12 j 03:06	5°♂49'07	
direct	-4006 Nov 22 j 23:37	14°♂07'56			-4000 Jan 12 j 14:56	0°♂	
	-4005 Jan 21 j 06:43	0°♂					
	-4005 Mar 20 j 17:25	0°♂		conjunction	-4000 Feb 13 j 16:17	23°♂52'17	-1°-3'-43
	-4005 May 10 j 08:44	0°♄		minimum elong	-4000 Feb 13 j 18:00	23°♂55'25	1°03'53
	-4005 Jun 26 j 06:55	0°♂			-4000 Feb 22 j 02:23	0°≈	
	-4005 Aug 09 j 07:05	0°♄		max. Earth dist.	-4000 Mar 26 j 16:35	23°≈50'32	2.50271 AU
evening set	-4005 Aug 12 j 13:09	2°♄17'24			-4000 Apr 04 j 14:11	0°♂	
max. Earth dist.	-4005 Aug 27 j 17:16	13°♄06'19	2.46415 AU	morning rise	-4000 Apr 12 j 23:22	5°♂44'22	
	-4005 Sep 19 j 20:40	0°♄			-4000 May 19 j 07:25	0°♂	
				asc. node	-4000 Jun 27 j 19:21	25°♂18'47	
conjunction	-4005 Oct 04 j 20:48	11°♄11'41	0°25'16		-4000 Jul 05 j 07:27	0°♂	
minimum elong	-4005 Oct 04 j 22:18	11°♄14'32	0°25'18		-4000 Aug 24 j 03:32	0°♄	
	-4005 Oct 29 j 14:14	0°♄			-4000 Oct 19 j 12:44	0°♂	
desc. node	-4005 Nov 10 j 14:21	9°♄15'36		retrograde	-4000 Dec 23 j 23:57	18°♂40'08	
morning rise	-4005 Dec 03 j 11:42	27°♄04'33		opposition	-3999 Jan 30 j 04:44	10°♂28'32	5°08'25
	-4005 Dec 07 j 05:27	0°♄		greatest brilliancy	-3999 Jan 31 j 17:09	9°♂54'13	-1.6m
greatest brilliancy	-4004 Jan 12 j 18:50	28°♄35'37	1.2m	min. Earth dist.	-3999 Feb 05 j 19:45	7°♂59'00	0.58765 AU
	-4004 Jan 14 j 14:08	0°♂		direct	-3999 Mar 11 j 19:03	0°♂46'06	
	-4004 Feb 22 j 13:29	0°♂			-3999 May 31 j 13:02	0°♄	
	-4004 Apr 03 j 01:21	0°≈		desc. node	-3999 Jul 02 j 09:18	20°♄05'27	
	-4004 May 16 j 02:23	0°♂			-3999 Jul 16 j 20:42	0°♄	
	-4004 Jul 02 j 10:36	0°♂			-3999 Aug 27 j 01:17	0°♄	
	-4004 Aug 30 j 21:39	0°♂			-3999 Oct 05 j 06:13	0°♄	
asc. node	-4004 Sep 22 j 19:55	6°♂52'55			-3999 Nov 13 j 01:38	0°♂	
retrograde	-4004 Oct 10 j 20:31	8°♂49'41			-3999 Dec 22 j 14:18	0°♂	
	-4004 Nov 17 j 11:47	30°♄			-3998 Feb 01 j 14:59	0°≈	
opposition	-4004 Nov 19 j 21:38	29°♂02'00	2°06'46	evening set	-3998 Feb 10 j 17:36	6°≈28'56	
min. Earth dist.	-4004 Nov 18 j 23:29	29°♂24'13	0.66752 AU		-3998 Mar 16 j 13:44	0°♂	
greatest brilliancy	-4004 Nov 19 j 18:03	29°♂05'36	-1.3m				
direct	-4004 Dec 30 j 01:51	19°♂21'49		conjunction	-3998 Apr 06 j 15:05	14°♂13'30	0°-22'-16
	-4003 Feb 15 j 02:08	0°♂		minimum elong	-3998 Apr 06 j 16:08	14°♂15'15	0°22'20
	-4003 Apr 16 j 19:28	0°♄		max. Earth dist.	-3998 Apr 28 j 17:49	28°♂52'28	2.60865 AU
	-4003 Jun 05 j 04:46	0°♂			-3998 Apr 30 j 10:59	0°♂	
	-4003 Jul 19 j 22:04	0°♄		asc. node	-3998 May 15 j 16:02	9°♂55'00	
	-4003 Aug 30 j 12:51	0°♄		morning rise	-3998 May 27 j 09:12	17°♂28'57	
desc. node	-4003 Sep 27 j 10:52	21°♄04'10			-3998 Jun 15 j 22:43	0°♂	
evening set	-4003 Oct 05 j 00:46	26°♄53'40			-3998 Aug 02 j 15:41	0°♄	
	-4003 Oct 09 j 01:17	0°♄			-3998 Sep 20 j 16:18	0°♂	
	-4003 Nov 16 j 09:57	0°♄			-3998 Nov 11 j 16:22	0°♄	
					-3997 Jan 18 j 01:12	0°♄	
conjunction	-4003 Dec 07 j 06:08	16°♄25'07	0°-46'-36	retrograde	-3997 Feb 15 j 01:09	4°♄16'06	
minimum elong	-4003 Dec 07 j 02:52	16°♄18'42	0°46'42		-3997 Mar 13 j 13:13	30°♄	
	-4003 Dec 24 j 13:15	0°♂		opposition	-3997 Mar 20 j 14:28	27°♄45'59	3°29'23
max. Earth dist.	-4002 Jan 02 j 04:50	6°♂45'13	2.37975 AU	greatest brilliancy	-3997 Mar 22 j 05:20	27°♄13'46	-2.3m
	-4002 Feb 01 j 08:52	0°♂		min. Earth dist.	-3997 Mar 28 j 23:31	25°♄00'23	0.46460 AU
morning rise	-4002 Feb 13 j 08:05	9°♂02'59		direct	-3997 Apr 26 j 11:16	19°♄49'59	
	-4002 Mar 13 j 15:59	0°≈		desc. node	-3997 May 20 j 08:58	23°♄31'14	
	-4002 Apr 25 j 02:23	0°♂			-3997 Jun 06 j 20:05	0°♄	
	-4002 Jun 09 j 06:38	0°♂			-3997 Jul 29 j 05:26	0°♄	
	-4002 Jul 28 j 07:45	0°♂			-3997 Sep 10 j 01:24	0°♄	
asc. node	-4002 Aug 10 j 20:27	7°♂39'47			-3997 Oct 20 j 23:24	0°♂	
	-4002 Sep 24 j 22:48	0°♄			-3997 Dec 01 j 01:52	0°♂	
retrograde	-4002 Nov 15 j 00:29	12°♄28'52			-3996 Jan 12 j 09:14	0°≈	
opposition	-4002 Dec 24 j 05:16	3°♄16'35	4°11'39		-3996 Feb 25 j 07:54	0°♂	
greatest brilliancy	-4002 Dec 24 j 16:23	3°♄05'37	-1.3m	evening set	-3996 Mar 29 j 09:07	21°♂51'53	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 41

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

asc. node	-3996 Apr 01 j 13:19	23° H 56'20			-3991 May 07 j 07:08	0° \approx	
	-3996 Apr 10 j 20:42	0° Y			-3991 Jun 26 j 07:56	0° H	
				retrograde	-3991 Aug 22 j 09:15	17° H 13'13	
conjunction	-3996 May 17 j 15:47	23° Y 42'27	0°25'30	min. Earth dist.	-3991 Sep 24 j 14:10	9° H 49'47	0.57567 AU
minimum elong	-3996 May 17 j 14:52	23° Y 40'59	0°25'33	opposition	-3991 Sep 30 j 14:59	7° H 27'59	-2°-13'-19
max. Earth dist.	-3996 May 23 j 00:23	27° Y 08'09	2.66380 AU	greatest brilliancy	-3991 Sep 29 j 23:20	7° H 43'20	-1.7m
	-3996 May 27 j 11:58	0° B			-3991 Oct 25 j 13:49	30° $\text{R}\approx$	
morning rise	-3996 Jul 03 j 02:20	23° B 20'08		direct	-3991 Nov 06 j 04:27	29° \approx 06'21	
	-3996 Jul 13 j 13:14	0° II			-3991 Nov 18 j 06:51	0° H	
	-3996 Aug 29 j 11:34	0° S		asc. node	-3991 Nov 22 j 10:20	0° H 40'48	
	-3996 Oct 15 j 03:49	0° O			-3990 Feb 03 j 21:01	0° Y	
	-3996 Dec 01 j 00:17	0° M			-3990 Mar 29 j 13:05	0° B	
	-3995 Jan 18 j 08:56	0° A			-3990 May 17 j 22:18	0° II	
	-3995 Mar 15 j 05:32	0° M			-3990 Jul 03 j 10:57	0° S	
desc. node	-3995 Apr 06 j 09:47	8° M 07'46		evening set	-3990 Jul 25 j 19:36	15° S 03'07	
retrograde	-3995 Apr 30 j 22:48	11° M 46'43		max. Earth dist.	-3990 Aug 10 j 14:12	25° S 56'02	2.51247 AU
opposition	-3995 May 31 j 12:30	6° M 41'55	-3°-58'-22		-3990 Aug 16 j 09:48	0° O	
greatest brilliancy	-3995 May 31 j 10:06	6° M 43'31	-2.9m				
min. Earth dist.	-3995 May 31 j 10:05	6° M 43'31	0.37686 AU	conjunction	-3990 Sep 14 j 09:31	20° O 42'29	0°46'41
direct	-3995 Jun 30 j 17:33	1° M 38'53		minimum elong	-3990 Sep 14 j 11:24	20° O 45'54	0°46'47
	-3995 Sep 15 j 23:49	0° A			-3990 Sep 27 j 02:13	0° M	
	-3995 Nov 03 j 10:40	0° S			-3990 Nov 06 j 00:20	0° A	
	-3995 Dec 19 j 14:09	0° \approx		morning rise	-3990 Nov 08 j 05:08	1° A 40'58	
	-3994 Feb 03 j 20:52	0° H		desc. node	-3990 Nov 27 j 08:08	16° A 24'18	
asc. node	-3994 Feb 17 j 11:12	8° H 43'48			-3990 Dec 14 j 20:29	0° M	
	-3994 Mar 22 j 19:42	0° Y			-3989 Jan 22 j 09:37	0° A	
evening set	-3994 May 08 j 17:05	29° Y 42'49			-3989 Mar 02 j 12:58	0° S	
	-3994 May 09 j 03:56	0° B			-3989 Apr 12 j 06:45	0° \approx	
max. Earth dist.	-3994 Jun 15 j 19:41	23° B 57'42	2.66487 AU		-3989 May 25 j 22:38	0° H	
					-3989 Jul 14 j 13:08	0° Y	
conjunction	-3994 Jun 24 j 12:49	29° B 32'53	0°59'54	retrograde	-3989 Sep 28 j 09:29	25° Y 35'09	
minimum elong	-3994 Jun 24 j 11:40	29° B 31'01	1°00'02	asc. node	-3989 Oct 10 j 11:12	24° Y 35'52	
	-3994 Jun 25 j 05:43	0° II		min. Earth dist.	-3989 Nov 05 j 01:55	16° Y 37'53	0.65345 AU
morning rise	-3994 Aug 08 j 18:41	28° II 55'51		opposition	-3989 Nov 07 j 11:20	15° Y 40'12	1°04'16
	-3994 Aug 10 j 09:39	0° S		greatest brilliancy	-3989 Nov 07 j 07:30	15° Y 44'04	-1.4m
	-3994 Sep 24 j 06:54	0° O		direct	-3989 Dec 16 j 20:45	6° Y 15'44	
	-3994 Nov 06 j 21:07	0° M			-3988 Mar 02 j 06:22	0° B	
	-3994 Dec 19 j 09:48	0° A			-3988 Apr 25 j 21:44	0° II	
	-3993 Jan 30 j 08:40	0° M			-3988 Jun 13 j 00:41	0° S	
desc. node	-3993 Feb 22 j 11:09	16° M 27'37			-3988 Jul 27 j 09:09	0° O	
	-3993 Mar 13 j 18:40	0° A			-3988 Sep 06 j 22:33	0° M	
	-3993 Apr 28 j 16:43	0° S		evening set	-3988 Sep 11 j 21:07	3° M 40'39	
retrograde	-3993 Jul 08 j 04:04	25° S 59'11		max. Earth dist.	-3988 Oct 10 j 14:12	25° M 26'37	2.39175 AU
min. Earth dist.	-3993 Aug 05 j 01:16	20° S 44'26	0.45375 AU	desc. node	-3988 Oct 14 j 06:12	28° M 16'00	
greatest brilliancy	-3993 Aug 11 j 01:28	18° S 41'21	-2.3m		-3988 Oct 16 j 12:07	0° A	
opposition	-3993 Aug 13 j 03:06	17° S 58'39	-5°-53'00				
direct	-3993 Sep 14 j 11:03	11° S 28'24		conjunction	-3988 Nov 10 j 02:53	19° A 09'29	0°-19'-4
	-3993 Nov 16 j 03:49	0° \approx		minimum elong	-3988 Nov 10 j 01:20	19° A 06'25	0°19'06
asc. node	-3992 Jan 05 j 09:58	26° \approx 58'12			-3988 Nov 23 j 22:24	0° M	
	-3992 Jan 10 j 16:09	0° H			-3987 Jan 01 j 02:42	0° A	
	-3992 Mar 01 j 05:29	0° Y		morning rise	-3987 Jan 15 j 23:33	11° A 35'11	
	-3992 Apr 19 j 05:40	0° B			-3987 Feb 08 j 22:20	0° S	
	-3992 Jun 05 j 22:25	0° II			-3987 Mar 21 j 05:24	0° \approx	
evening set	-3992 Jun 15 j 00:48	5° II 50'08			-3987 May 02 j 18:08	0° H	
max. Earth dist.	-3992 Jul 09 j 23:14	22° II 03'25	2.61258 AU		-3987 Jun 17 j 09:51	0° Y	
	-3992 Jul 21 j 23:31	0° S			-3987 Aug 07 j 08:09	0° B	
				asc. node	-3987 Aug 27 j 10:53	10° B 18'35	
conjunction	-3992 Aug 01 j 01:09	6° S 43'47	1°10'52	retrograde	-3987 Nov 01 j 02:48	29° B 33'29	
minimum elong	-3992 Aug 01 j 01:23	6° S 44'10	1°11'02	opposition	-3987 Dec 10 j 18:30	20° B 04'49	3°29'45
	-3992 Sep 04 j 02:47	0° O		greatest brilliancy	-3987 Dec 10 j 21:55	20° B 01'24	-1.3m
morning rise	-3992 Sep 17 j 10:09	9° O 18'28		min. Earth dist.	-3987 Dec 12 j 03:58	19° B 31'30	0.67025 AU
	-3992 Oct 16 j 09:33	0° M		direct	-3986 Jan 20 j 17:58	10° B 08'38	
	-3992 Nov 26 j 03:30	0° A			-3986 Mar 29 j 05:57	0° II	
	-3991 Jan 04 j 21:20	0° M			-3986 May 22 j 03:34	0° S	
desc. node	-3991 Jan 09 j 09:59	3° M 26'38			-3986 Jul 07 j 02:32	0° O	
	-3991 Feb 13 j 08:22	0° A			-3986 Aug 18 j 02:59	0° M	
	-3991 Mar 25 j 13:44	0° S		desc. node	-3986 Sep 01 j 03:32	10° M 27'33	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 42

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-3986 Sep 26 j 17:54	0°♄		behind sun end	-3981 May 03 j 19:58	9°♃44'33	
	-3986 Nov 04 j 02:52	0°♆		max. Earth dist.	-3981 May 14 j 16:14	16°♃44'31	2.64860 AU
evening set	-3986 Nov 14 j 18:40	8°♆23'50			-3981 Jun 04 j 08:22	0°♄	
	-3986 Dec 12 j 06:26	0°♂		morning rise	-3981 Jun 19 j 19:34	9°♄51'37	
					-3981 Jul 21 j 13:15	0°♅	
conjunction	-3985 Jan 19 j 09:17	29°♂26'28	-1°-7'-34		-3981 Sep 07 j 01:24	0°♆	
minimum elong	-3985 Jan 19 j 08:50	29°♂25'37	1°07'46		-3981 Oct 25 j 01:27	0°♇	
	-3985 Jan 20 j 02:56	0°♈			-3981 Dec 13 j 20:50	0°♈	
	-3985 Mar 01 j 11:13	0°♈			-3980 Feb 09 j 11:06	0°♉	
max. Earth dist.	-3985 Mar 08 j 22:27	5°♈24'04	2.45073 AU	retrograde	-3980 Mar 30 j 02:26	12°♉21'10	
morning rise	-3985 Mar 24 j 01:29	16°♈11'22		desc. node	-3980 Apr 23 j 02:14	8°♉57'28	
	-3985 Apr 12 j 20:32	0°♉		opposition	-3980 Apr 30 j 00:50	7°♉04'29	0°-30'-1
	-3985 May 27 j 14:55	0°♊		greatest brilliancy	-3980 Apr 30 j 04:03	7°♉02'13	-2.8m
	-3985 Jul 14 j 02:22	0°♋		min. Earth dist.	-3980 May 05 j 03:01	5°♉38'51	0.39521 AU
asc. node	-3985 Jul 15 j 10:24	0°♋48'52		direct	-3980 Jun 01 j 11:51	1°♉10'10	
	-3985 Sep 03 j 17:35	0°♌			-3980 Aug 16 j 17:05	0°♍	
	-3985 Nov 10 j 19:44	0°♍			-3980 Oct 01 j 22:26	0°♎	
retrograde	-3985 Dec 08 j 12:02	4°♍09'02			-3980 Nov 14 j 17:19	0°♏	
	-3984 Jan 03 j 02:08	30°♎♌			-3980 Dec 28 j 17:23	0°♐	
opposition	-3984 Jan 15 j 15:20	25°♌30'01	4°57'16		-3979 Feb 11 j 19:16	0°♑	
greatest brilliancy	-3984 Jan 16 j 17:39	25°♌04'38	-1.4m	asc. node	-3979 Mar 06 j 02:45	14°♑33'18	
min. Earth dist.	-3984 Jan 20 j 20:31	23°♌29'25	0.62304 AU		-3979 Mar 30 j 01:24	0°♒	
direct	-3984 Feb 25 j 17:40	15°♌33'46		evening set	-3979 Apr 23 j 12:34	15°♒39'03	
	-3984 Apr 19 j 16:32	0°♓			-3979 May 16 j 01:06	0°♓	
	-3984 Jun 12 j 06:39	0°♑		max. Earth dist.	-3979 Jun 06 j 11:49	13°♓39'35	2.67103 AU
desc. node	-3984 Jul 19 j 01:38	24°♑48'47					
	-3984 Jul 26 j 08:21	0°♒		conjunction	-3979 Jun 09 j 23:37	15°♓53'11	0°48'49
	-3984 Sep 04 j 18:12	0°♓		minimum elong	-3979 Jun 09 j 22:20	15°♓51'08	0°48'55
	-3984 Oct 13 j 13:17	0°♒			-3979 Jul 02 j 01:21	0°♌	
	-3984 Nov 21 j 01:15	0°♓		morning rise	-3979 Jul 25 j 08:16	14°♌59'37	
	-3984 Dec 30 j 06:50	0°♔			-3979 Aug 17 j 10:24	0°♕	
evening set	-3983 Jan 19 j 14:04	15°♔06'48			-3979 Oct 01 j 20:16	0°♖	
	-3983 Feb 09 j 00:42	0°♕			-3979 Nov 15 j 07:56	0°♗	
					-3979 Dec 29 j 04:49	0°♘	
conjunction	-3983 Mar 18 j 17:22	26°♕33'22	0°-41'-7		-3978 Feb 11 j 04:48	0°♙	
minimum elong	-3983 Mar 18 j 19:16	26°♕36'38	0°41'13	desc. node	-3978 Mar 11 j 02:54	18°♙26'37	
	-3983 Mar 23 j 17:31	0°♑			-3978 Mar 29 j 14:04	0°♒	
max. Earth dist.	-3983 Apr 17 j 06:46	16°♑37'29	2.57256 AU	retrograde	-3978 Jun 15 j 02:26	29°♒46'13	
	-3983 May 07 j 11:20	0°♒		min. Earth dist.	-3978 Jul 11 j 19:06	25°♒11'38	0.40865 AU
morning rise	-3983 May 11 j 06:32	2°♒29'26		greatest brilliancy	-3978 Jul 16 j 17:21	23°♒41'44	-2.6m
asc. node	-3983 Jun 01 j 09:14	16°♒11'03		opposition	-3978 Jul 18 j 14:53	23°♒06'43	-6°-30'-59
	-3983 Jun 23 j 00:56	0°♓		direct	-3978 Aug 18 j 08:52	17°♒29'49	
	-3983 Aug 10 j 07:02	0°♌			-3978 Oct 06 j 00:29	0°♔	
	-3983 Sep 29 j 23:26	0°♍			-3978 Dec 01 j 17:06	0°♕	
	-3983 Nov 27 j 01:54	0°♖			-3977 Jan 20 j 14:10	0°♑	
retrograde	-3982 Jan 23 j 02:05	14°♖53'28		asc. node	-3977 Jan 22 j 01:24	0°♑53'58	
opposition	-3982 Feb 27 j 06:10	7°♖37'52	4°38'41		-3977 Mar 10 j 06:08	0°♒	
greatest brilliancy	-3982 Mar 01 j 03:58	6°♖57'15	-2.0m		-3977 Apr 27 j 10:35	0°♓	
min. Earth dist.	-3982 Mar 07 j 12:39	4°♖42'37	0.51625 AU	evening set	-3977 Jun 01 j 02:23	21°♓52'16	
	-3982 Mar 24 j 13:59	30°♗♓			-3977 Jun 13 j 19:50	0°♌	
direct	-3982 Apr 07 j 02:56	28°♓44'32		max. Earth dist.	-3977 Jun 30 j 22:15	11°♌01'24	2.63941 AU
	-3982 Apr 20 j 22:06	0°♑					
desc. node	-3982 Jun 06 j 01:40	17°♑36'34		conjunction	-3977 Jul 17 j 16:26	21°♌57'30	1°10'03
	-3982 Jun 27 j 10:53	0°♒		minimum elong	-3977 Jul 17 j 15:58	21°♌56'44	1°10'13
	-3982 Aug 10 j 21:36	0°♓			-3977 Jul 29 j 20:58	0°♕	
	-3982 Sep 20 j 12:41	0°♆		morning rise	-3977 Sep 01 j 17:36	22°♕47'05	
	-3982 Oct 30 j 06:19	0°♇			-3977 Sep 12 j 05:53	0°♖	
	-3982 Dec 09 j 12:42	0°♈			-3977 Oct 24 j 22:39	0°♗	
	-3981 Jan 20 j 04:31	0°♈			-3977 Dec 05 j 05:23	0°♉	
	-3981 Mar 04 j 15:21	0°♉			-3976 Jan 14 j 13:37	0°♊	
evening set	-3981 Mar 13 j 01:48	5°♉40'52		desc. node	-3976 Jan 27 j 04:16	9°♊26'32	
	-3981 Apr 18 j 20:16	0°♊			-3976 Feb 23 j 17:06	0°♋	
asc. node	-3981 Apr 19 j 05:41	0°♊15'22			-3976 Apr 04 j 22:24	0°♌	
					-3976 May 20 j 01:40	0°♍	
conjunction	-3981 May 03 j 02:25	9°♊16'09	0°07'55	retrograde	-3976 Aug 06 j 02:02	29°♍42'54	
minimum elong	-3981 May 03 j 02:05	9°♊15'37	0°07'56	min. Earth dist.	-3976 Sep 06 j 04:42	23°♍07'06	0.53114 AU
behind sun begin	-3981 May 02 j 08:12	8°♊46'40		greatest brilliancy	-3976 Sep 12 j 05:07	20°♍50'21	-1.9m

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 43

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

opposition	-3976 Sep 13 j 11:09	20° \approx 21'47	-3°-41'-49			-3971 Oct 04 j 07:34	0° Ω	
direct	-3976 Oct 18 j 13:09	12° \approx 36'49		evening set		-3971 Oct 19 j 04:16	11° Ω 33'19	
asc. node	-3976 Dec 09 j 00:32	25° \approx 32'28				-3971 Nov 11 j 16:02	0° \mathbb{M}	
	-3976 Dec 19 j 02:50	0° \mathbb{X}				-3971 Dec 19 j 18:56	0° \mathbb{X}	
	-3975 Feb 14 j 10:40	0° \mathbb{Y}						
	-3975 Apr 06 j 15:04	0° \mathbb{X}		conjunction		-3971 Dec 23 j 00:25	2° \mathbb{X} 31'35	0°-58'-6
	-3975 May 25 j 04:22	0° \mathbb{II}		minimum elong		-3971 Dec 22 j 21:31	2° \mathbb{X} 25'54	0°58'15
evening set	-3975 Jul 09 j 08:45	29° \mathbb{II} 16'20				-3970 Jan 27 j 14:02	0° \mathbb{Z}	
	-3975 Jul 10 j 11:02	0° \mathbb{S}		max. Earth dist.		-3970 Feb 06 j 05:14	7° \mathbb{Z} 17'50	2.40027 AU
max. Earth dist.	-3975 Jul 27 j 23:31	11° \mathbb{S} 45'56	2.55688 AU	morning rise		-3970 Feb 28 j 05:17	23° \mathbb{Z} 41'00	
	-3975 Aug 23 j 10:49	0° Ω				-3970 Mar 08 j 20:33	0° \approx	
						-3970 Apr 20 j 05:19	0° \mathbb{X}	
conjunction	-3975 Aug 27 j 00:06	2° Ω 29'25	1°01'07			-3970 Jun 04 j 03:55	0° \mathbb{Y}	
minimum elong	-3975 Aug 27 j 01:31	2° Ω 31'55	1°01'15			-3970 Jul 22 j 10:34	0° \mathbb{X}	
	-3975 Oct 04 j 08:06	0° \mathbb{M}		asc. node		-3970 Aug 01 j 02:18	5° \mathbb{X} 40'01	
morning rise	-3975 Oct 17 j 00:51	9° \mathbb{M} 21'41				-3970 Sep 15 j 08:16	0° \mathbb{II}	
	-3975 Nov 13 j 12:52	0° Ω		retrograde		-3970 Nov 23 j 08:12	20° \mathbb{II} 30'35	
desc. node	-3975 Dec 14 j 02:41	23° Ω 24'03		opposition		-3969 Jan 01 j 04:57	11° \mathbb{II} 29'11	4°31'34
	-3975 Dec 22 j 15:56	0° \mathbb{M}		greatest brilliancy		-3969 Jan 01 j 21:12	11° \mathbb{II} 13'16	-1.3m
	-3974 Jan 30 j 11:26	0° \mathbb{X}		min. Earth dist.		-3969 Jan 04 j 22:29	10° \mathbb{II} 01'31	0.64909 AU
	-3974 Mar 10 j 21:07	0° \mathbb{Z}		direct		-3969 Feb 11 j 10:55	1° \mathbb{II} 28'13	
	-3974 Apr 21 j 00:56	0° \approx				-3969 May 05 j 03:37	0° \mathbb{S}	
	-3974 Jun 04 j 19:48	0° \mathbb{X}				-3969 Jun 23 j 01:23	0° Ω	
	-3974 Jul 29 j 17:41	0° \mathbb{Y}		desc. node		-3969 Aug 05 j 19:24	0° \mathbb{M} 35'07	
retrograde	-3974 Sep 14 j 14:52	11° \mathbb{Y} 43'52				-3969 Aug 05 j 00:08	0° \mathbb{M}	
min. Earth dist.	-3974 Oct 20 j 16:48	3° \mathbb{Y} 18'53	0.62979 AU			-3969 Sep 13 j 23:40	0° Ω	
opposition	-3974 Oct 24 j 13:00	1° \mathbb{Y} 46'31	0°-5'-58			-3969 Oct 22 j 12:54	0° \mathbb{M}	
greatest brilliancy	-3974 Oct 25 j 13:30	1° \mathbb{Y} 22'00	-1.5m			-3969 Nov 29 j 20:00	0° \mathbb{X}	
asc. node	-3974 Oct 27 j 00:46	0° \mathbb{Y} 46'56		evening set		-3969 Dec 26 j 23:34	20° \mathbb{X} 58'17	
	-3974 Oct 29 j 00:35	30° \mathbb{R} \mathbb{X}				-3968 Jan 07 j 20:25	0° \mathbb{Z}	
direct	-3974 Dec 01 j 23:18	22° \mathbb{X} 42'11				-3968 Feb 17 j 08:56	0° \approx	
	-3973 Jan 08 j 18:14	0° \mathbb{Y}						
	-3973 Mar 14 j 09:22	0° \mathbb{X}		conjunction		-3968 Feb 26 j 16:58	6° \approx 42'58	0°-57'-7
	-3973 May 05 j 04:03	0° \mathbb{II}		minimum elong		-3968 Feb 26 j 19:07	6° \approx 46'50	0°57'15
	-3973 Jun 21 j 11:47	0° \mathbb{S}				-3968 Mar 30 j 21:16	0° \mathbb{X}	
	-3973 Aug 04 j 15:00	0° Ω		max. Earth dist.		-3968 Apr 04 j 06:32	3° \mathbb{X} 00'42	2.52924 AU
evening set	-3973 Aug 23 j 08:10	13° Ω 18'07		morning rise		-3968 Apr 23 j 18:27	16° \mathbb{X} 13'04	
max. Earth dist.	-3973 Sep 09 j 06:07	25° Ω 36'38	2.43669 AU			-3968 May 14 j 13:18	0° \mathbb{Y}	
	-3973 Sep 15 j 04:53	0° \mathbb{M}		asc. node		-3968 Jun 18 j 00:38	22° \mathbb{Y} 14'20	
						-3968 Jun 30 j 07:48	0° \mathbb{X}	
conjunction	-3973 Oct 17 j 13:24	24° \mathbb{M} 22'45	0°10'13			-3968 Aug 18 j 10:13	0° \mathbb{II}	
minimum elong	-3973 Oct 17 j 14:07	24° \mathbb{M} 24'06	0°10'14			-3968 Oct 10 j 22:21	0° \mathbb{S}	
behind sun begin	-3973 Oct 16 j 18:28	23° \mathbb{M} 46'32		retrograde		-3967 Jan 03 j 06:35	27° \mathbb{S} 59'13	
behind sun end	-3973 Oct 18 j 09:45	25° \mathbb{M} 01'42		opposition		-3967 Feb 08 j 19:33	20° \mathbb{S} 05'48	5°05'32
	-3973 Oct 24 j 21:10	0° Ω		greatest brilliancy		-3967 Feb 10 j 12:51	19° \mathbb{S} 27'32	-1.7m
desc. node	-3973 Oct 31 j 23:23	5° Ω 28'20		min. Earth dist.		-3967 Feb 16 j 03:25	17° \mathbb{S} 23'17	0.56398 AU
	-3973 Dec 02 j 10:35	0° \mathbb{M}		direct		-3967 Mar 20 j 22:29	10° \mathbb{S} 36'21	
morning rise	-3973 Dec 19 j 01:15	13° \mathbb{M} 01'47				-3967 May 22 j 04:12	0° Ω	
	-3972 Jan 09 j 17:30	0° \mathbb{X}		desc. node		-3967 Jun 22 j 17:50	18° Ω 29'40	
	-3972 Feb 17 j 14:52	0° \mathbb{Z}				-3967 Jul 10 j 05:12	0° \mathbb{M}	
	-3972 Mar 28 j 23:48	0° \approx				-3967 Aug 21 j 05:05	0° Ω	
	-3972 May 10 j 18:07	0° \mathbb{X}				-3967 Sep 29 j 19:15	0° \mathbb{M}	
	-3972 Jun 26 j 05:42	0° \mathbb{Y}				-3967 Nov 07 j 20:55	0° \mathbb{X}	
	-3972 Aug 19 j 21:22	0° \mathbb{X}				-3967 Dec 17 j 14:26	0° \mathbb{Z}	
asc. node	-3972 Sep 13 j 02:04	9° \mathbb{X} 56'17				-3966 Jan 27 j 19:05	0° \approx	
retrograde	-3972 Oct 18 j 14:18	16° \mathbb{X} 42'41		evening set		-3966 Feb 22 j 06:19	17° \approx 54'09	
opposition	-3972 Nov 27 j 12:51	7° \mathbb{X} 00'54	2°39'38			-3966 Mar 11 j 20:52	0° \mathbb{X}	
greatest brilliancy	-3972 Nov 27 j 10:57	7° \mathbb{X} 02'49	-1.3m					
min. Earth dist.	-3972 Nov 27 j 10:38	7° \mathbb{X} 03'08	0.67115 AU	conjunction		-3966 Apr 16 j 14:30	23° \mathbb{X} 56'33	0°-11'-6
	-3972 Dec 17 j 08:18	30° \mathbb{R} \mathbb{Y}		minimum elong		-3966 Apr 16 j 15:00	23° \mathbb{X} 57'23	0°11'08
direct	-3971 Jan 07 j 00:53	27° \mathbb{Y} 13'49		behind sun begin		-3966 Apr 15 j 23:44	23° \mathbb{X} 32'12	
	-3971 Jan 29 j 08:14	0° \mathbb{X}		behind sun end		-3966 Apr 17 j 06:16	24° \mathbb{X} 22'34	
	-3971 Apr 10 j 05:54	0° \mathbb{II}				-3966 Apr 25 j 19:38	0° \mathbb{Y}	
	-3971 May 30 j 21:02	0° \mathbb{S}		max. Earth dist.		-3966 May 04 j 19:44	5° \mathbb{Y} 52'53	2.62514 AU
	-3971 Jul 14 j 23:56	0° Ω		asc. node		-3966 May 05 j 22:15	6° \mathbb{Y} 36'03	
	-3971 Aug 25 j 18:18	0° \mathbb{M}		morning rise		-3966 Jun 05 j 02:36	26° \mathbb{Y} 03'54	
desc. node	-3971 Sep 17 j 20:53	17° \mathbb{M} 22'20				-3966 Jun 11 j 06:24	0° \mathbb{X}	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 44

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-3966 Jul 28 j 17:48	0°♄		asc. node	-3961 Dec 26 j 15:49	25°♌47'22	
	-3966 Sep 15 j 02:18	0°♅			-3960 Jan 03 j 09:59	0°♈	
	-3966 Nov 04 j 05:02	0°♆			-3960 Feb 24 j 14:54	0°♏	
	-3966 Dec 30 j 12:59	0°♎			-3960 Apr 14 j 06:27	0°♉	
retrograde	-3965 Mar 01 j 15:32	17°♎06'11			-3960 Jun 01 j 06:01	0°♊	
opposition	-3965 Apr 03 j 07:07	11°♎03'45	2°22'49	evening set	-3960 Jun 23 j 17:56	14°♊28'05	
greatest brilliancy	-3965 Apr 04 j 10:02	10°♎42'35	-2.5m	max. Earth dist.	-3960 Jul 16 j 06:33	29°♊15'39	2.59479 AU
min. Earth dist.	-3965 Apr 11 j 03:48	8°♎36'38	0.43655 AU		-3960 Jul 17 j 09:15	0°♋	
direct	-3965 May 08 j 16:11	3°♎49'16					
desc. node	-3965 May 10 j 19:03	3°♎51'09		conjunction	-3960 Aug 10 j 04:15	16°♋00'43	1°08'59
	-3965 Jul 19 j 01:26	0°♌		minimum elong	-3960 Aug 10 j 04:55	16°♋01'52	1°09'09
	-3965 Sep 02 j 14:13	0°♍			-3960 Aug 30 j 11:37	0°♌	
	-3965 Oct 14 j 15:00	0°♎		morning rise	-3960 Sep 27 j 14:00	19°♌51'32	
	-3965 Nov 25 j 09:32	0°♏			-3960 Oct 11 j 15:05	0°♎	
	-3964 Jan 07 j 03:46	0°♐			-3960 Nov 21 j 04:06	0°♏	
	-3964 Feb 20 j 10:07	0°♑		desc. node	-3960 Dec 30 j 19:55	0°♏07'40	
asc. node	-3964 Mar 22 j 18:38	20°♑39'21			-3960 Dec 30 j 15:54	0°♐	
	-3964 Apr 06 j 03:49	0°♒			-3959 Feb 07 j 20:15	0°♑	
evening set	-3964 Apr 07 j 18:52	1°♒03'09			-3959 Mar 19 j 16:19	0°♏	
	-3964 May 22 j 21:17	0°♓			-3959 Apr 30 j 14:42	0°♐	
					-3959 Jun 16 j 17:50	0°♑	
conjunction	-3964 May 26 j 06:42	2°♓09'56	0°34'47	retrograde	-3959 Aug 31 j 03:37	26°♑48'38	
minimum elong	-3964 May 26 j 05:34	2°♓08'07	0°34'52	min. Earth dist.	-3959 Oct 04 j 10:25	19°♑01'10	0.59728 AU
max. Earth dist.	-3964 May 28 j 09:36	3°♓31'05	2.66878 AU	opposition	-3959 Oct 09 j 16:32	16°♑56'13	-1°-24'-35
	-3964 Jul 08 j 21:41	0°♊		greatest brilliancy	-3959 Oct 09 j 07:39	17°♑05'01	-1.6m
morning rise	-3964 Jul 11 j 04:43	1°♊27'59		asc. node	-3959 Nov 12 j 16:28	8°♑21'40	
	-3964 Aug 24 j 14:27	0°♋		direct	-3959 Nov 15 j 23:06	8°♑17'28	
	-3964 Oct 09 j 18:12	0°♌			-3958 Jan 26 j 17:25	0°♒	
	-3964 Nov 24 j 13:56	0°♍			-3958 Mar 23 j 19:48	0°♓	
	-3963 Jan 09 j 18:14	0°♎			-3958 May 12 j 22:24	0°♊	
	-3963 Feb 27 j 10:32	0°♏			-3958 Jun 28 j 17:34	0°♋	
desc. node	-3963 Mar 27 j 20:57	15°♏13'12		evening set	-3958 Aug 04 j 17:53	25°♋05'48	
retrograde	-3963 May 18 j 10:17	29°♏39'09			-3958 Aug 11 j 18:25	0°♌	
min. Earth dist.	-3963 Jun 15 j 11:03	25°♏05'40	0.38015 AU	max. Earth dist.	-3958 Aug 19 j 20:10	5°♌41'30	2.48623 AU
opposition	-3963 Jun 18 j 13:33	24°♏15'09	-5°-29'-21		-3958 Sep 22 j 10:27	0°♍	
greatest brilliancy	-3963 Jun 17 j 18:01	24°♏28'25	-2.8m				
direct	-3963 Jul 18 j 07:42	19°♏14'36		conjunction	-3958 Sep 25 j 17:10	2°♍25'29	0°35'16
	-3963 Aug 31 j 06:43	0°♎		minimum elong	-3958 Sep 25 j 18:58	2°♍28'48	0°35'21
	-3963 Oct 26 j 01:00	0°♏			-3958 Nov 01 j 06:48	0°♎	
	-3963 Dec 13 j 05:03	0°♐		desc. node	-3958 Nov 17 j 17:49	12°♎40'38	
	-3962 Jan 29 j 10:16	0°♑		morning rise	-3958 Nov 22 j 01:36	16°♎01'37	
asc. node	-3962 Feb 07 j 16:03	5°♑51'43			-3958 Dec 10 j 00:26	0°♏	
	-3962 Mar 17 j 20:53	0°♒			-3957 Jan 17 j 10:52	0°♑	
	-3962 May 04 j 11:15	0°♓			-3957 Feb 25 j 11:07	0°♏	
evening set	-3962 May 17 j 07:08	8°♓06'41			-3957 Apr 06 j 23:51	0°♐	
	-3962 Jun 20 j 15:29	0°♊			-3957 May 20 j 04:33	0°♑	
max. Earth dist.	-3962 Jun 21 j 07:07	0°♊25'05	2.65810 AU		-3957 Jul 07 j 04:13	0°♒	
					-3957 Sep 10 j 23:10	0°♓	
conjunction	-3962 Jul 02 j 21:55	7°♊54'04	1°04'46	asc. node	-3957 Sep 30 j 16:55	3°♓29'56	
minimum elong	-3962 Jul 02 j 20:56	7°♊52'30	1°04'55	retrograde	-3957 Oct 06 j 04:36	3°♓41'25	
	-3962 Aug 05 j 18:16	0°♋			-3957 Oct 29 j 14:51	30°♒♏	
morning rise	-3962 Aug 17 j 06:45	7°♋38'14		min. Earth dist.	-3957 Nov 13 j 16:36	24°♒27'49	0.66238 AU
	-3962 Sep 19 j 10:52	0°♌		opposition	-3957 Nov 15 j 06:14	23°♒49'59	1°41'39
	-3962 Nov 01 j 16:39	0°♍		greatest brilliancy	-3957 Nov 15 j 01:59	23°♒54'15	-1.3m
	-3962 Dec 13 j 17:09	0°♎		direct	-3957 Dec 25 j 02:07	14°♒16'12	
	-3961 Jan 23 j 23:11	0°♏			-3956 Feb 22 j 09:13	0°♓	
desc. node	-3961 Feb 12 j 20:54	14°♏30'45			-3956 Apr 20 j 01:46	0°♊	
	-3961 Mar 06 j 07:15	0°♑			-3956 Jun 07 j 22:39	0°♋	
	-3961 Apr 18 j 15:27	0°♒			-3956 Jul 22 j 13:22	0°♌	
	-3961 Jun 10 j 17:22	0°♓			-3956 Sep 02 j 04:47	0°♍	
retrograde	-3961 Jul 19 j 17:22	9°♓23'52		evening set	-3956 Sep 24 j 16:04	16°♍53'09	
min. Earth dist.	-3961 Aug 17 j 16:01	3°♓40'55	0.48141 AU	desc. node	-3956 Oct 04 j 14:29	24°♍28'41	
greatest brilliancy	-3961 Aug 23 j 21:01	1°♓27'52	-2.2m		-3956 Oct 11 j 18:32	0°♎	
opposition	-3961 Aug 25 j 17:22	0°♓48'03	-5°-10'-8	max. Earth dist.	-3956 Nov 16 j 05:12	27°♎40'20	2.37691 AU
	-3961 Aug 27 j 23:34	30°♒♓			-3956 Nov 19 j 04:12	0°♏	
direct	-3961 Sep 28 j 01:59	23°♓49'05					
	-3961 Oct 31 j 09:39	0°♐		conjunction	-3956 Nov 25 j 04:51	4°♏44'38	0°-35'-28

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 45

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

minimum elong	-3956 Nov 25 j 02:03	4° \mathbb{M} 39'08	0°35'31	retrograde	-3950 Feb 04 j 15:23	25° Ω 57'06	
	-3956 Dec 27 j 07:51	0° \mathcal{X}		opposition	-3950 Mar 10 j 22:41	19° Ω 05'39	4°05'03
morning rise	-3955 Feb 01 j 04:59	27° \mathcal{X} 46'55		greatest brilliancy	-3950 Mar 12 j 18:13	18° Ω 28'16	-2.1m
	-3955 Feb 04 j 02:47	0° \mathcal{Z}		min. Earth dist.	-3950 Mar 19 j 09:31	16° Ω 12'36	0.48787 AU
	-3955 Mar 16 j 08:35	0° \approx		direct	-3950 Apr 17 j 18:32	10° Ω 41'11	
	-3955 Apr 27 j 18:22	0° \mathcal{H}		desc. node	-3950 May 27 j 11:47	20° Ω 00'56	
	-3955 Jun 12 j 00:55	0° \mathcal{Y}			-3950 Jun 16 j 22:59	0° \mathbb{M}	
	-3955 Jul 31 j 15:35	0° \mathcal{B}			-3950 Aug 03 j 14:39	0° $\underline{\Omega}$	
asc. node	-3955 Aug 17 j 17:30	9° \mathcal{B} 21'50			-3950 Sep 14 j 06:53	0° \mathbb{M}	
	-3955 Oct 02 j 07:36	0° \mathbb{I}			-3950 Oct 24 j 14:06	0° \mathcal{X}	
retrograde	-3955 Nov 09 j 01:07	7° \mathbb{I} 22'55			-3950 Dec 04 j 05:54	0° \mathcal{Z}	
	-3955 Dec 13 j 11:34	30° \mathcal{R} \mathcal{B}			-3949 Jan 15 j 04:29	0° \approx	
opposition	-3955 Dec 18 j 11:09	28° \mathcal{B} 02'58	3°55'02		-3949 Feb 27 j 20:25	0° \mathcal{H}	
greatest brilliancy	-3955 Dec 18 j 18:40	27° \mathcal{B} 55'31	-1.3m	evening set	-3949 Mar 23 j 03:12	15° \mathcal{H} 31'54	
min. Earth dist.	-3955 Dec 20 j 16:48	27° \mathcal{B} 09'47	0.66547 AU	asc. node	-3949 Apr 09 j 10:36	26° \mathcal{H} 54'23	
direct	-3954 Jan 28 j 14:19	18° \mathcal{B} 03'27			-3949 Apr 14 j 04:24	0° \mathcal{Y}	
	-3954 Mar 19 j 06:17	0° \mathbb{I}					
	-3954 May 16 j 00:51	0° \mathcal{G}		conjunction	-3949 May 12 j 03:04	18° \mathcal{Y} 04'38	0°18'21
	-3954 Jul 01 j 19:43	0° Ω		minimum elong	-3949 May 12 j 02:22	18° \mathcal{Y} 03'30	0°18'23
	-3954 Aug 13 j 03:04	0° \mathbb{M}		max. Earth dist.	-3949 May 20 j 07:13	23° \mathcal{Y} 19'22	2.65804 AU
desc. node	-3954 Aug 22 j 12:41	6° \mathbb{M} 57'44			-3949 May 30 j 17:33	0° \mathcal{B}	
	-3954 Sep 21 j 20:40	0° $\underline{\Omega}$		morning rise	-3949 Jun 28 j 01:37	18° \mathcal{B} 03'51	
	-3954 Oct 30 j 06:39	0° \mathbb{M}			-3949 Jul 16 j 20:03	0° \mathbb{I}	
greatest brilliancy	-3954 Nov 09 j 19:40	8° \mathbb{M} 17'52	1.2m		-3949 Sep 01 j 23:57	0° \mathcal{G}	
evening set	-3954 Nov 30 j 07:23	24° \mathbb{M} 24'20			-3949 Oct 19 j 04:51	0° Ω	
	-3954 Dec 07 j 10:55	0° \mathcal{X}			-3949 Dec 06 j 02:59	0° \mathbb{M}	
	-3953 Jan 15 j 08:09	0° \mathcal{Z}			-3948 Jan 26 j 02:01	0° $\underline{\Omega}$	
				desc. node	-3948 Apr 13 j 12:23	28° $\underline{\Omega}$ 50'21	
conjunction	-3953 Feb 03 j 01:36	14° \mathcal{Z} 05'00	-1°-6'-45	retrograde	-3948 Apr 16 j 23:03	28° $\underline{\Omega}$ 54'56	
minimum elong	-3953 Feb 03 j 02:35	14° \mathcal{Z} 06'49	1°06'56	opposition	-3948 May 17 j 10:44	23° $\underline{\Omega}$ 51'33	-2°-29'-44
	-3953 Feb 24 j 17:01	0° \approx		greatest brilliancy	-3948 May 17 j 16:34	23° $\underline{\Omega}$ 47'37	-2.9m
max. Earth dist.	-3953 Mar 20 j 06:17	16° \approx 51'36	2.47999 AU	min. Earth dist.	-3948 May 19 j 20:09	23° $\underline{\Omega}$ 12'46	0.38132 AU
morning rise	-3953 Apr 05 j 07:07	28° \approx 03'46		direct	-3948 Jun 17 j 11:56	18° $\underline{\Omega}$ 32'12	
	-3953 Apr 08 j 02:26	0° \mathcal{H}			-3948 Jul 31 j 23:42	0° \mathbb{M}	
	-3953 May 22 j 18:30	0° \mathcal{Y}			-3948 Sep 23 j 03:15	0° \mathcal{X}	
asc. node	-3953 Jul 05 j 16:44	28° \mathcal{Y} 01'00			-3948 Nov 07 j 23:27	0° \mathcal{Z}	
	-3953 Jul 08 j 21:31	0° \mathcal{B}			-3948 Dec 22 j 23:50	0° \approx	
	-3953 Aug 28 j 07:38	0° \mathbb{I}			-3947 Feb 06 j 15:44	0° \mathcal{H}	
	-3953 Oct 26 j 15:31	0° \mathcal{G}		asc. node	-3947 Feb 24 j 08:28	11° \mathcal{H} 27'43	
retrograde	-3953 Dec 17 j 17:37	12° \mathcal{G} 44'35			-3947 Mar 25 j 05:51	0° \mathcal{Y}	
opposition	-3952 Jan 24 j 08:56	4° \mathcal{G} 20'05	5°05'23	evening set	-3947 May 02 j 07:16	24° \mathcal{Y} 13'00	
greatest brilliancy	-3952 Jan 25 j 17:00	3° \mathcal{G} 49'30	-1.5m		-3947 May 11 j 09:48	0° \mathcal{B}	
min. Earth dist.	-3952 Jan 30 j 09:11	2° \mathcal{G} 02'40	0.60467 AU	max. Earth dist.	-3947 Jun 11 j 21:48	20° \mathcal{B} 02'58	2.66867 AU
	-3952 Feb 04 j 23:38	30° \mathcal{R} \mathbb{I}					
direct	-3952 Mar 05 j 05:36	24° \mathbb{I} 29'56		conjunction	-3947 Jun 18 j 08:41	24° \mathcal{B} 10'25	0°55'39
	-3952 Apr 05 j 08:09	0° \mathcal{G}		minimum elong	-3947 Jun 18 j 07:26	24° \mathcal{B} 08'25	0°55'46
	-3952 Jun 05 j 07:22	0° Ω			-3947 Jun 27 j 10:59	0° \mathbb{I}	
desc. node	-3952 Jul 09 j 12:21	22° Ω 17'52		morning rise	-3947 Aug 02 j 14:14	23° \mathbb{I} 22'08	
	-3952 Jul 20 j 13:19	0° \mathbb{M}			-3947 Aug 12 j 17:29	0° \mathcal{G}	
	-3952 Aug 30 j 09:40	0° $\underline{\Omega}$			-3947 Sep 26 j 20:45	0° Ω	
	-3952 Oct 08 j 09:51	0° \mathbb{M}			-3947 Nov 09 j 20:18	0° \mathbb{M}	
	-3952 Nov 16 j 01:16	0° \mathcal{X}			-3947 Dec 22 j 22:12	0° $\underline{\Omega}$	
	-3952 Dec 25 j 09:40	0° \mathcal{Z}			-3946 Feb 03 j 15:03	0° \mathbb{M}	
evening set	-3951 Feb 01 j 11:23	28° \mathcal{Z} 00'26		desc. node	-3946 Mar 01 j 13:58	18° \mathbb{M} 01'21	
	-3951 Feb 04 j 05:52	0° \approx			-3946 Mar 19 j 06:57	0° \mathcal{X}	
	-3951 Mar 19 j 00:40	0° \mathcal{H}			-3946 May 07 j 21:12	0° \mathcal{Z}	
				retrograde	-3946 Jun 28 j 15:01	15° \mathcal{Z} 31'34	
conjunction	-3951 Mar 29 j 18:02	7° \mathcal{H} 18'20	0°-30'-23	min. Earth dist.	-3946 Jul 25 j 19:15	10° \mathcal{Z} 38'00	0.43221 AU
minimum elong	-3951 Mar 29 j 19:28	7° \mathcal{H} 20'46	0°30'27	greatest brilliancy	-3946 Jul 31 j 11:38	8° \mathcal{Z} 46'59	-2.5m
max. Earth dist.	-3951 Apr 24 j 01:15	24° \mathcal{H} 14'17	2.59357 AU	opposition	-3946 Aug 02 j 14:10	8° \mathcal{Z} 05'29	-6°-17'-53
	-3951 May 02 j 19:03	0° \mathcal{Y}		direct	-3946 Sep 03 j 03:19	1° \mathcal{Z} 59'37	
morning rise	-3951 May 20 j 15:46	11° \mathcal{Y} 38'48			-3946 Nov 22 j 20:50	0° \approx	
asc. node	-3951 May 22 j 13:35	12° \mathcal{Y} 52'57		asc. node	-3945 Jan 12 j 07:02	28° \approx 46'22	
	-3951 Jun 18 j 06:34	0° \mathcal{B}			-3945 Jan 14 j 08:36	0° \mathcal{H}	
	-3951 Aug 05 j 03:59	0° \mathbb{I}			-3945 Mar 04 j 23:40	0° \mathcal{Y}	
	-3951 Sep 23 j 18:42	0° \mathcal{G}			-3945 Apr 22 j 14:45	0° \mathcal{B}	
	-3951 Nov 16 j 16:17	0° Ω		evening set	-3945 Jun 09 j 15:42	0° \mathbb{I} 17'51	

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-3945 Jun 09 j 04:33	0°II				-3940 Feb 12 j 16:52	0°Z		
max. Earth dist.	-3945 Jul 06 j 18:36	17°II49'38	2.62549 AU			-3940 Mar 23 j 23:17	0°≈		
	-3945 Jul 25 j 06:17	0°S				-3940 May 05 j 12:28	0°H		
						-3940 Jun 20 j 09:13	0°Y		
conjunction	-3945 Jul 26 j 09:57	0°S45'55	1°11'07			-3940 Aug 11 j 09:26	0°B		
minimum elong	-3945 Jul 26 j 09:52	0°S45'47	1°11'17		asc. node	-3940 Sep 03 j 07:43	10°B59'42		
	-3945 Sep 07 j 12:59	0°Q			retrograde	-3940 Oct 26 j 08:51	24°B32'56		
morning rise	-3945 Sep 11 j 02:31	2°Q28'13			opposition	-3940 Dec 05 j 03:52	14°B58'02	3°09'44	
	-3945 Oct 20 j 00:51	0°P			greatest brilliancy	-3940 Dec 05 j 04:38	14°B57'17	-1.3m	
	-3945 Nov 30 j 00:59	0°A			min. Earth dist.	-3940 Dec 05 j 21:34	14°B40'21	0.67197 AU	
	-3944 Jan 09 j 01:03	0°M			direct	-3939 Jan 14 j 22:26	5°B05'17		
desc. node	-3944 Jan 17 j 13:11	6°M25'40				-3939 Apr 02 j 21:44	0°II		
	-3944 Feb 17 j 18:32	0°J				-3939 May 25 j 07:21	0°S		
	-3944 Mar 29 j 07:56	0°Z				-3939 Jul 09 j 22:55	0°Q		
	-3944 May 11 j 18:16	0°≈				-3939 Aug 20 j 21:50	0°P		
	-3944 Jul 04 j 07:57	0°H			desc. node	-3939 Sep 08 j 06:57	13°P44'47		
retrograde	-3944 Aug 15 j 15:24	10°H23'55				-3939 Sep 29 j 12:55	0°A		
min. Earth dist.	-3944 Sep 16 j 22:01	3°H20'39	0.55649 AU		evening set	-3939 Nov 02 j 23:07	26°A53'30		
opposition	-3944 Sep 23 j 12:18	0°H47'28	-2°-50'-25			-3939 Nov 06 j 21:51	0°M		
greatest brilliancy	-3944 Sep 22 j 14:46	1°H08'22	-1.8m			-3939 Dec 15 j 00:46	0°J		
	-3944 Sep 25 j 13:36	30°R≈							
direct	-3944 Oct 29 j 10:28	22°≈41'08			conjunction	-3938 Jan 07 j 15:07	18°J21'09	-1°-5'-14	
asc. node	-3944 Nov 29 j 06:44	27°≈54'34			minimum elong	-3938 Jan 07 j 13:28	18°J17'59	1°05'23	
	-3944 Dec 05 j 16:02	0°H				-3938 Jan 22 j 19:51	0°Z		
	-3943 Feb 07 j 19:07	0°Y			max. Earth dist.	-3938 Feb 26 j 02:21	25°Z37'33	2.42727 AU	
	-3943 Apr 01 j 07:23	0°B				-3938 Mar 04 j 01:59	0°≈		
	-3943 May 20 j 08:25	0°II			morning rise	-3938 Mar 14 j 03:01	7°≈16'02		
	-3943 Jul 05 j 19:24	0°S				-3938 Apr 15 j 09:28	0°H		
evening set	-3943 Jul 18 j 15:19	8°S34'38				-3938 May 30 j 03:41	0°Y		
max. Earth dist.	-3943 Aug 04 j 12:57	20°S05'10	2.53293 AU			-3938 Jul 16 j 20:37	0°B		
	-3943 Aug 18 j 19:51	0°Q			asc. node	-3938 Jul 22 j 07:14	3°B16'44		
						-3938 Sep 07 j 12:07	0°II		
conjunction	-3943 Sep 06 j 06:19	13°Q03'00	0°53'40		retrograde	-3938 Dec 01 j 21:52	28°II41'15		
minimum elong	-3943 Sep 06 j 08:04	13°Q06'07	0°53'46		opposition	-3937 Jan 09 j 09:29	19°II51'44	4°47'40	
	-3943 Sep 29 j 15:17	0°P			greatest brilliancy	-3937 Jan 10 j 07:17	19°II30'31	-1.4m	
morning rise	-3943 Oct 29 j 05:57	22°P04'05			min. Earth dist.	-3937 Jan 13 j 22:53	18°II05'23	0.63592 AU	
	-3943 Nov 08 j 17:01	0°A			direct	-3937 Feb 19 j 14:05	9°II52'17		
desc. node	-3943 Dec 04 j 11:02	19°A45'44				-3937 Apr 26 j 18:36	0°S		
	-3943 Dec 17 j 16:21	0°M				-3937 Jun 17 j 00:46	0°Q		
	-3942 Jan 25 j 08:00	0°J			desc. node	-3937 Jul 27 j 04:54	27°Q32'31		
	-3942 Mar 05 j 13:20	0°Z				-3937 Jul 30 j 14:50	0°P		
	-3942 Apr 15 j 09:32	0°≈				-3937 Sep 08 j 20:44	0°A		
	-3942 May 29 j 09:04	0°H				-3937 Oct 17 j 13:13	0°M		
	-3942 Jul 19 j 09:51	0°Y				-3937 Nov 24 j 22:33	0°J		
retrograde	-3942 Sep 22 j 15:08	20°Y13'10				-3936 Jan 03 j 01:03	0°Z		
asc. node	-3942 Oct 17 j 07:34	16°Y03'28			evening set	-3936 Jan 10 j 04:39	5°Z22'45		
min. Earth dist.	-3942 Oct 29 j 14:36	11°Y29'35	0.64406 AU			-3936 Feb 12 j 15:15	0°≈		
opposition	-3942 Nov 01 j 15:20	10°Y16'29	0°35'51						
greatest brilliancy	-3942 Nov 01 j 12:38	10°Y19'11	-1.4m		conjunction	-3936 Mar 09 j 22:37	18°≈43'00	0°-48'-26	
direct	-3942 Dec 10 j 14:22	1°Y00'24			minimum elong	-3936 Mar 10 j 00:45	18°≈46'45	0°48'32	
	-3941 Mar 07 j 10:42	0°B				-3936 Mar 26 j 04:42	0°H		
	-3941 Apr 29 j 18:51	0°II			max. Earth dist.	-3936 Apr 11 j 23:07	11°H25'47	2.55398 AU	
	-3941 Jun 16 j 14:30	0°S			morning rise	-3936 May 03 j 23:25	26°H08'00		
	-3941 Jul 30 j 22:07	0°Q				-3936 May 09 j 20:14	0°Y		
evening set	-3941 Sep 03 j 16:37	24°Q57'09			asc. node	-3936 Jun 08 j 06:15	19°Y04'42		
	-3941 Sep 10 j 12:51	0°P				-3936 Jun 25 j 10:35	0°B		
max. Earth dist.	-3941 Sep 25 j 00:08	10°P48'26	2.41047 AU			-3936 Aug 12 j 23:21	0°II		
	-3941 Oct 20 j 04:25	0°A				-3936 Oct 03 j 14:27	0°S		
desc. node	-3941 Oct 22 j 09:19	1°A42'01				-3936 Dec 05 j 22:49	0°Q		
					retrograde	-3935 Jan 14 j 05:00	7°Q47'09		
conjunction	-3941 Oct 31 j 02:00	8°A26'01	0°-6'-13		opposition	-3935 Feb 19 j 00:11	0°Q13'34	4°53'43	
minimum elong	-3941 Oct 31 j 01:30	8°A25'03	0°06'15			-3935 Feb 19 j 15:10	30°R≈		
behind sun begin	-3941 Oct 30 j 01:14	7°A37'59			greatest brilliancy	-3935 Feb 20 j 20:46	29°S33'06	-1.8m	
behind sun end	-3941 Nov 01 j 01:45	9°A12'09			min. Earth dist.	-3935 Feb 26 j 21:37	27°S22'14	0.53845 AU	
	-3941 Nov 27 j 16:13	0°M			direct	-3935 Mar 30 j 11:51	21°S01'30		
morning rise	-3940 Jan 04 j 06:39	29°M31'22				-3935 May 09 j 01:41	0°Q		
	-3940 Jan 04 j 21:18	0°J			desc. node	-3935 Jun 13 j 04:19	17°Q48'38		

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-3935 Jul 02 j 20:17	0°♎		conjunction	-3930 Jul 11 j 07:47	16°♊19'07	1°08'19
	-3935 Aug 15 j 01:05	0°♏		minimum elong	-3930 Jul 11 j 07:04	16°♊17'57	1°08'29
	-3935 Sep 24 j 03:48	0°♌			-3930 Aug 01 j 04:05	0°♍	
	-3935 Nov 02 j 13:03	0°♐		morning rise	-3930 Aug 25 j 23:47	16°♍34'47	
	-3935 Dec 12 j 12:25	0°♑			-3930 Sep 14 j 17:11	0°♒	
	-3934 Jan 22 j 21:45	0°♑			-3930 Oct 27 j 16:06	0°♎	
evening set	-3934 Mar 05 j 04:55	28°♑41'19			-3930 Dec 08 j 06:44	0°♏	
	-3934 Mar 07 j 03:14	0°♐			-3929 Jan 17 j 23:47	0°♌	
	-3934 Apr 21 j 04:12	0°♑		desc. node	-3929 Feb 03 j 07:06	12°♌05'11	
					-3929 Feb 27 j 13:35	0°♐	
conjunction	-3934 Apr 26 j 04:46	3°♑16'57	0°00'02		-3929 Apr 10 j 11:02	0°♑	
minimum elong	-3934 Apr 26 j 04:43	3°♑16'52	0°00'02		-3929 May 27 j 12:38	0°♑	
behind sun begin	-3934 Apr 25 j 10:35	2°♑47'19		retrograde	-3929 Jul 30 j 12:36	21°♑46'26	
behind sun end	-3934 Apr 26 j 22:51	3°♑46'24		min. Earth dist.	-3929 Aug 29 j 15:20	15°♑33'42	0.50936 AU
asc. node	-3934 Apr 26 j 03:12	3°♑14'25		greatest brilliancy	-3929 Sep 04 j 19:29	13°♑16'35	-2.0m
max. Earth dist.	-3934 May 10 j 15:48	12°♑40'23	2.63917 AU	opposition	-3929 Sep 06 j 07:59	12°♑42'35	-4°-20'-26
	-3934 Jun 06 j 14:56	0°♐		direct	-3929 Oct 10 j 16:39	5°♑16'50	
morning rise	-3934 Jun 13 j 15:17	4°♐28'37		asc. node	-3929 Dec 16 j 21:40	25°♑30'03	
	-3934 Jul 23 j 21:52	0°♊			-3929 Dec 26 j 00:21	0°♐	
	-3934 Sep 09 j 17:47	0°♍			-3928 Feb 18 j 17:26	0°♑	
	-3934 Oct 28 j 12:34	0°♒			-3928 Apr 09 j 04:58	0°♐	
	-3934 Dec 19 j 08:55	0°♎			-3928 May 27 j 12:40	0°♊	
	-3933 Mar 03 j 09:46	0°♏		evening set	-3928 Jul 02 j 14:15	23°♊16'10	
retrograde	-3933 Mar 17 j 17:07	1°♏12'34			-3928 Jul 12 j 18:45	0°♍	
	-3933 Mar 31 j 17:17	30°♎		max. Earth dist.	-3928 Jul 22 j 22:28	6°♍46'50	2.57479 AU
opposition	-3933 Apr 18 j 08:47	25°♎37'17	0°53'06				
greatest brilliancy	-3933 Apr 18 j 18:16	25°♎30'17	-2.6m	conjunction	-3928 Aug 19 j 14:35	25°♍38'57	1°05'12
min. Earth dist.	-3933 Apr 25 j 01:16	23°♎39'31	0.41175 AU	minimum elong	-3928 Aug 19 j 15:43	25°♍40'54	1°05'21
desc. node	-3933 May 01 j 05:08	21°♎58'55			-3928 Aug 25 j 20:52	0°♒	
direct	-3933 May 22 j 03:49	19°♎07'42			-3928 Oct 06 j 21:49	0°♎	
	-3933 Jul 03 j 21:33	0°♏		morning rise	-3928 Oct 08 j 07:52	1°♎02'10	
	-3933 Aug 24 j 21:49	0°♌			-3928 Nov 16 j 06:55	0°♏	
	-3933 Oct 07 j 18:26	0°♐		desc. node	-3928 Dec 21 j 05:59	26°♏39'55	
	-3933 Nov 19 j 11:30	0°♑			-3928 Dec 25 j 14:02	0°♌	
	-3932 Jan 01 j 19:43	0°♑			-3927 Feb 02 j 12:54	0°♐	
	-3932 Feb 15 j 11:10	0°♐			-3927 Mar 14 j 01:54	0°♑	
asc. node	-3932 Mar 13 j 00:04	17°♐24'34			-3927 Apr 24 j 10:50	0°♑	
	-3932 Apr 01 j 10:32	0°♑			-3927 Jun 08 j 21:42	0°♐	
evening set	-3932 Apr 16 j 21:17	9°♑55'55			-3927 Aug 07 j 17:37	0°♑	
	-3932 May 18 j 06:58	0°♐		retrograde	-3927 Sep 08 j 14:11	5°♑57'28	
					-3927 Oct 08 j 04:24	30°♎	
conjunction	-3932 Jun 03 j 18:09	10°♐29'49	0°43'16	min. Earth dist.	-3927 Oct 13 j 21:09	27°♐48'20	0.61631 AU
minimum elong	-3932 Jun 03 j 16:53	10°♐27'48	0°43'21	opposition	-3927 Oct 18 j 08:27	26°♐01'09	0°-37'-57
max. Earth dist.	-3932 Jun 02 j 17:38	9°♐50'46	2.67105 AU	greatest brilliancy	-3927 Oct 18 j 04:59	26°♐04'37	-1.5m
	-3932 Jul 04 j 07:07	0°♊		asc. node	-3927 Nov 02 j 21:31	20°♐26'09	
morning rise	-3932 Jul 19 j 07:22	9°♊37'50		direct	-3927 Nov 25 j 06:19	17°♐07'28	
	-3932 Aug 19 j 19:38	0°♍			-3926 Jan 16 j 15:48	0°♑	
	-3932 Oct 04 j 13:15	0°♒			-3926 Mar 17 j 18:22	0°♐	
	-3932 Nov 18 j 13:47	0°♎			-3926 May 07 j 19:38	0°♊	
	-3931 Jan 02 j 07:28	0°♏			-3926 Jun 23 j 22:57	0°♍	
	-3931 Feb 16 j 19:14	0°♌			-3926 Aug 07 j 02:30	0°♒	
desc. node	-3931 Mar 18 j 05:51	18°♌16'49		evening set	-3926 Aug 15 j 02:29	5°♒38'11	
	-3931 Apr 08 j 05:05	0°♐		max. Earth dist.	-3926 Aug 30 j 15:09	16°♒44'50	2.45889 AU
retrograde	-3931 Jun 03 j 16:04	17°♐24'17			-3926 Sep 17 j 18:19	0°♎	
min. Earth dist.	-3931 Jun 30 j 12:57	12°♐56'51	0.39301 AU				
greatest brilliancy	-3931 Jul 04 j 12:03	11°♐48'30	-2.7m	conjunction	-3926 Oct 07 j 17:54	14°♎55'21	0°21'44
opposition	-3931 Jul 06 j 00:18	11°♐22'14	-6°-20'-14	minimum elong	-3926 Oct 07 j 19:14	14°♎57'53	0°21'46
direct	-3931 Aug 05 j 04:46	6°♐05'51			-3926 Oct 27 j 13:12	0°♏	
	-3931 Oct 15 j 13:40	0°♑		desc. node	-3926 Nov 08 j 02:57	8°♏55'07	
	-3931 Dec 06 j 06:54	0°♑			-3926 Dec 05 j 04:50	0°♌	
	-3930 Jan 23 j 19:07	0°♐		morning rise	-3926 Dec 06 j 21:58	1°♌20'27	
asc. node	-3930 Jan 28 j 22:42	3°♐12'35		greatest brilliancy	-3926 Dec 28 j 01:54	17°♌54'49	1.2m
	-3930 Mar 12 j 20:31	0°♑			-3925 Jan 12 j 13:03	0°♐	
	-3930 Apr 29 j 18:22	0°♐			-3925 Feb 20 j 10:58	0°♑	
evening set	-3930 May 25 j 18:47	16°♐25'39			-3925 Apr 01 j 20:09	0°♑	
	-3930 Jun 16 j 01:36	0°♊			-3925 May 14 j 16:25	0°♐	
max. Earth dist.	-3930 Jun 26 j 20:36	6°♊56'24	2.64885 AU		-3925 Jun 30 j 14:04	0°♑	

Planetary Phenomena of Mars from -4400 through -3900 (UT), Astrodienst AG 7-Dez-2017 14:36, page 48

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

	-3925 Aug 26 j 19:48	0°♄				-3920 Oct 03 j 02:22	0°♍		
asc. node	-3925 Sep 20 j 23:00	8°♄36'01				-3920 Nov 10 j 22:46	0°♎		
retrograde	-3925 Oct 13 j 22:35	11°♄39'47				-3920 Dec 20 j 11:14	0°♏		
opposition	-3925 Nov 22 j 22:30	1°♄53'14	2°16'24			-3919 Jan 30 j 10:50	0°♐		
min. Earth dist.	-3925 Nov 22 j 04:26	2°♄11'23	0.66842 AU	evening set		-3919 Feb 13 j 13:08	10°♐01'00		
greatest brilliancy	-3925 Nov 22 j 19:06	1°♄56'40	-1.3m			-3919 Mar 14 j 08:02	0°♑		
	-3925 Nov 27 j 16:03	30°♑							
direct	-3924 Jan 02 j 03:18	22°♑11'36		conjunction		-3919 Apr 09 j 02:55	17°♑24'35	0°-19'-18	
	-3924 Feb 10 j 13:28	0°♒		minimum elong		-3919 Apr 09 j 03:50	17°♑26'05	0°19'20	
	-3924 Apr 13 j 19:57	0°♓				-3919 Apr 28 j 03:38	0°♒		
	-3924 Jun 02 j 17:16	0°♓		max. Earth dist.		-3919 Apr 30 j 08:55	1°♒27'25	2.61199 AU	
	-3924 Jul 17 j 16:21	0°♑		asc. node		-3919 May 12 j 19:41	9°♒34'46		
	-3924 Aug 28 j 10:30	0°♑		morning rise		-3919 May 29 j 14:45	20°♒25'46		
desc. node	-3924 Sep 25 j 00:22	20°♑45'52				-3919 Jun 13 j 13:42	0°♒		
	-3924 Oct 07 j 00:46	0°♑				-3919 Jul 31 j 04:23	0°♓		
evening set	-3924 Oct 08 j 04:28	0°♑53'31				-3919 Sep 18 j 00:07	0°♓		
	-3924 Nov 14 j 09:59	0°♑				-3919 Nov 08 j 09:43	0°♑		
						-3918 Jan 10 j 00:25	0°♑		
conjunction	-3924 Dec 10 j 18:46	20°♑46'16	0°-49'-37	retrograde		-3918 Feb 18 j 05:54	7°♑54'55		
minimum elong	-3924 Dec 10 j 15:30	20°♑39'50	0°49'43	opposition		-3918 Mar 23 j 16:05	1°♑30'00	3°14'26	
	-3924 Dec 22 j 12:50	0°♑		greatest brilliancy		-3918 Mar 25 j 04:28	1°♑00'07	-2.3m	
max. Earth dist.	-3923 Jan 12 j 11:09	16°♑18'06	2.38256 AU			-3918 Mar 28 j 05:36	30°♑		
	-3923 Jan 30 j 07:07	0°♒		min. Earth dist.		-3918 Apr 01 j 00:19	28°♑46'59	0.45891 AU	
morning rise	-3923 Feb 16 j 19:25	13°♒13'54		direct		-3918 Apr 29 j 05:07	23°♑41'51		
	-3923 Mar 11 j 12:08	0°♒		desc. node		-3918 May 17 j 21:28	25°♑59'13		
	-3923 Apr 22 j 19:40	0°♑				-3918 May 31 j 01:20	0°♑		
	-3923 Jun 06 j 19:33	0°♑				-3918 Jul 26 j 00:48	0°♑		
	-3923 Jul 25 j 11:39	0°♒				-3918 Sep 07 j 10:22	0°♑		
asc. node	-3923 Aug 07 j 23:39	7°♒45'00				-3918 Oct 18 j 13:17	0°♑		
	-3923 Sep 20 j 11:33	0°♓				-3918 Nov 28 j 17:44	0°♒		
retrograde	-3923 Nov 17 j 04:31	15°♓19'21				-3917 Jan 10 j 01:36	0°♒		
opposition	-3923 Dec 26 j 07:23	6°♓09'18	4°17'15			-3917 Feb 23 j 00:03	0°♑		
greatest brilliancy	-3923 Dec 26 j 19:36	5°♓57'17	-1.3m	asc. node		-3917 Mar 30 j 16:21	23°♑35'32		
min. Earth dist.	-3923 Dec 29 j 08:53	4°♓56'51	0.65765 AU	evening set		-3917 Apr 01 j 19:03	24°♑58'17		
	-3922 Jan 12 j 01:47	30°♒				-3917 Apr 09 j 12:24	0°♑		
direct	-3922 Feb 05 j 12:25	26°♒08'14							
	-3922 Mar 03 j 21:12	0°♓		conjunction		-3917 May 20 j 21:22	26°♑38'45	0°28'09	
	-3922 May 09 j 08:01	0°♓		minimum elong		-3917 May 20 j 20:22	26°♑37'09	0°28'12	
	-3922 Jun 26 j 07:24	0°♑		max. Earth dist.		-3917 May 25 j 17:29	29°♑44'19	2.66507 AU	
	-3922 Aug 08 j 00:21	0°♑				-3917 May 26 j 03:18	0°♒		
desc. node	-3922 Aug 12 j 22:46	3°♑37'19		morning rise		-3917 Jul 06 j 04:39	26°♒11'01		
	-3922 Sep 16 j 22:03	0°♑				-3917 Jul 12 j 04:16	0°♓		
	-3922 Oct 25 j 10:04	0°♑				-3917 Aug 28 j 01:52	0°♓		
	-3922 Dec 02 j 15:26	0°♑				-3917 Oct 13 j 15:55	0°♑		
evening set	-3922 Dec 15 j 13:01	10°♑02'05				-3917 Nov 29 j 06:54	0°♑		
	-3921 Jan 10 j 13:34	0°♒				-3916 Jan 16 j 01:34	0°♑		
						-3916 Mar 09 j 08:37	0°♑		
conjunction	-3921 Feb 16 j 19:06	27°♒41'37	-1°-2'-16	desc. node		-3916 Apr 03 j 23:45	10°♑46'54		
minimum elong	-3921 Feb 16 j 20:58	27°♒45'02	1°02'25	retrograde		-3916 May 04 j 21:22	16°♑24'46		
	-3921 Feb 19 j 23:13	0°♒		opposition		-3916 Jun 04 j 11:39	11°♑18'23	-4°-22'-8	
max. Earth dist.	-3921 Mar 29 j 20:42	26°♒53'12	2.50774 AU	greatest brilliancy		-3916 Jun 04 j 06:21	11°♑21'54	-2.9m	
	-3921 Apr 03 j 08:44	0°♑		min. Earth dist.		-3916 Jun 03 j 18:56	11°♑29'30	0.37656 AU	
morning rise	-3921 Apr 16 j 15:57	9°♑06'10		direct		-3916 Jul 04 j 11:15	6°♑17'45		
	-3921 May 17 j 23:17	0°♑				-3916 Sep 11 j 19:27	0°♑		
asc. node	-3921 Jun 25 j 21:50	25°♑02'21				-3916 Oct 31 j 10:29	0°♒		
	-3921 Jul 03 j 19:41	0°♒				-3916 Dec 16 j 22:23	0°♒		
	-3921 Aug 22 j 08:21	0°♓				-3915 Feb 01 j 08:23	0°♑		
	-3921 Oct 16 j 14:26	0°♓		asc. node		-3915 Feb 14 j 13:13	8°♑27'44		
retrograde	-3921 Dec 27 j 12:50	21°♓43'38				-3915 Mar 20 j 08:48	0°♑		
opposition	-3920 Feb 02 j 13:44	13°♓35'35	5°07'39			-3915 May 06 j 18:12	0°♒		
greatest brilliancy	-3920 Feb 04 j 03:11	13°♓00'21	-1.6m	evening set		-3915 May 10 j 22:59	2°♒39'34		
min. Earth dist.	-3920 Feb 09 j 07:42	11°♓03'29	0.58315 AU	max. Earth dist.		-3915 Jun 17 j 07:46	26°♒26'15	2.66394 AU	
direct	-3920 Mar 14 j 01:28	3°♓55'11				-3915 Jun 22 j 21:11	0°♓		
	-3920 May 28 j 04:17	0°♑							
desc. node	-3920 Jun 29 j 20:58	20°♑13'41		conjunction		-3915 Jun 26 j 17:09	2°♓27'38	1°01'22	
	-3920 Jul 14 j 07:19	0°♑		minimum elong		-3915 Jun 26 j 16:01	2°♓25'49	1°01'30	
	-3920 Aug 24 j 18:34	0°♑				-3915 Aug 08 j 02:08	0°♓		

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

morning rise	-3915 Aug 10 j 22:42	1° \mathfrak{D} 52'56		-3909 Feb 27 j 12:13	0° \mathfrak{B}		
	-3915 Sep 21 j 23:53	0° \mathfrak{Q}		-3909 Apr 24 j 03:09	0° \mathfrak{H}		
	-3915 Nov 04 j 13:42	0° \mathfrak{M}		-3909 Jun 11 j 14:08	0° \mathfrak{S}		
	-3915 Dec 17 j 00:54	0° \mathfrak{L}		-3909 Jul 26 j 03:08	0° \mathfrak{Q}		
	-3914 Jan 27 j 20:33	0° \mathfrak{M}		-3909 Sep 05 j 19:29	0° \mathfrak{M}		
desc. node	-3914 Feb 19 j 23:55	16° \mathfrak{M} 34'39		evening set	-3909 Sep 15 j 20:26	7° \mathfrak{M} 28'44	
	-3914 Mar 10 j 23:34	0° \mathfrak{J}		desc. node	-3909 Oct 12 j 17:56	27° \mathfrak{M} 54'59	
	-3914 Apr 25 j 00:16	0° \mathfrak{Z}			-3909 Oct 15 j 10:52	0° \mathfrak{L}	
retrograde	-3914 Jul 11 j 00:19	29° \mathfrak{Z} 55'51		max. Earth dist.	-3909 Oct 17 j 14:24	1° \mathfrak{L} 39'24	2.38808 AU
min. Earth dist.	-3914 Aug 08 j 00:55	24° \mathfrak{Z} 36'36	0.45880 AU				
greatest brilliancy	-3914 Aug 14 j 03:28	22° \mathfrak{Z} 30'39	-2.3m	conjunction	-3909 Nov 14 j 12:46	23° \mathfrak{L} 25'10	0°-23'-7
opposition	-3914 Aug 16 j 04:09	21° \mathfrak{Z} 48'31	-5°-44'-4	minimum elong	-3909 Nov 14 j 10:53	23° \mathfrak{L} 21'28	0°23'10
direct	-3914 Sep 17 j 17:33	15° \mathfrak{Z} 12'48			-3909 Nov 22 j 21:56	0° \mathfrak{M}	
	-3914 Nov 11 j 10:54	0° \mathfrak{W}			-3909 Dec 31 j 02:00	0° \mathfrak{J}	
asc. node	-3913 Jan 02 j 12:32	27° \mathfrak{W} 06'22		morning rise	-3908 Jan 20 j 16:27	16° \mathfrak{J} 02'30	
	-3913 Jan 07 j 14:36	0° \mathfrak{H}			-3908 Feb 07 j 20:26	0° \mathfrak{Z}	
	-3913 Feb 27 j 13:09	0° \mathfrak{Y}			-3908 Mar 19 j 01:18	0° \mathfrak{W}	
	-3913 Apr 17 j 17:27	0° \mathfrak{B}			-3908 Apr 30 j 10:34	0° \mathfrak{H}	
	-3913 Jun 04 j 13:02	0° \mathfrak{H}			-3908 Jun 14 j 20:26	0° \mathfrak{Y}	
evening set	-3913 Jun 18 j 06:29	8° \mathfrak{H} 48'00			-3908 Aug 04 j 04:03	0° \mathfrak{B}	
max. Earth dist.	-3913 Jul 12 j 20:19	24° \mathfrak{H} 48'50	2.60954 AU	asc. node	-3908 Aug 24 j 14:09	10° \mathfrak{B} 44'06	
	-3913 Jul 20 j 16:32	0° \mathfrak{S}			-3908 Oct 13 j 22:13	0° \mathfrak{H}	
				retrograde	-3908 Nov 03 j 05:00	2° \mathfrak{H} 21'40	
conjunction	-3913 Aug 04 j 07:49	9° \mathfrak{S} 47'03	1°10'31		-3908 Nov 22 j 04:27	30° \mathfrak{R} \mathfrak{B}	
minimum elong	-3913 Aug 04 j 08:09	9° \mathfrak{S} 47'37	1°10'41	opposition	-3908 Dec 12 j 19:06	22° \mathfrak{B} 54'39	3°37'03
	-3913 Sep 02 j 21:45	0° \mathfrak{Q}		greatest brilliancy	-3908 Dec 12 j 23:22	22° \mathfrak{B} 50'24	-1.3m
morning rise	-3913 Sep 20 j 20:25	12° \mathfrak{Q} 33'49		min. Earth dist.	-3908 Dec 14 j 08:42	22° \mathfrak{B} 17'12	0.66960 AU
	-3913 Oct 15 j 05:44	0° \mathfrak{M}		direct	-3907 Jan 22 j 18:35	12° \mathfrak{B} 57'31	
	-3913 Nov 25 j 00:03	0° \mathfrak{L}			-3907 Mar 25 j 07:15	0° \mathfrak{H}	
	-3912 Jan 03 j 17:20	0° \mathfrak{M}			-3907 May 19 j 10:24	0° \mathfrak{S}	
desc. node	-3912 Jan 07 j 22:46	3° \mathfrak{M} 13'06			-3907 Jul 04 j 18:12	0° \mathfrak{Q}	
	-3912 Feb 12 j 02:43	0° \mathfrak{J}			-3907 Aug 15 j 22:56	0° \mathfrak{M}	
	-3912 Mar 23 j 04:34	0° \mathfrak{Z}		desc. node	-3907 Aug 29 j 15:38	10° \mathfrak{M} 11'00	
	-3912 May 04 j 13:46	0° \mathfrak{W}			-3907 Sep 24 j 16:03	0° \mathfrak{L}	
	-3912 Jun 22 j 08:43	0° \mathfrak{H}			-3907 Nov 02 j 01:49	0° \mathfrak{M}	
retrograde	-3912 Aug 24 j 17:10	20° \mathfrak{H} 25'45		evening set	-3907 Nov 18 j 08:49	12° \mathfrak{M} 50'09	
min. Earth dist.	-3912 Sep 27 j 03:01	12° \mathfrak{H} 56'46	0.57994 AU		-3907 Dec 10 j 05:09	0° \mathfrak{J}	
opposition	-3912 Oct 02 j 23:22	10° \mathfrak{H} 38'44	-2°00'-3		-3906 Jan 18 j 00:39	0° \mathfrak{Z}	
greatest brilliancy	-3912 Oct 02 j 09:32	10° \mathfrak{H} 52'22	-1.7m				
direct	-3912 Nov 08 j 15:24	2° \mathfrak{H} 13'33		conjunction	-3906 Jan 22 j 21:25	3° \mathfrak{Z} 41'34	-1°-7'-43
asc. node	-3912 Nov 19 j 12:54	2° \mathfrak{H} 57'16		minimum elong	-3906 Jan 22 j 21:23	3° \mathfrak{Z} 41'29	1°07'53
	-3911 Jan 31 j 09:26	0° \mathfrak{Y}			-3906 Feb 27 j 07:16	0° \mathfrak{W}	
	-3911 Mar 26 j 18:28	0° \mathfrak{B}		max. Earth dist.	-3906 Mar 11 j 16:08	8° \mathfrak{W} 56'18	2.45660 AU
	-3911 May 15 j 10:13	0° \mathfrak{H}		morning rise	-3906 Mar 27 j 02:06	19° \mathfrak{W} 53'06	
	-3911 Jul 01 j 02:58	0° \mathfrak{S}			-3906 Apr 10 j 14:19	0° \mathfrak{H}	
evening set	-3911 Jul 28 j 05:56	18° \mathfrak{S} 15'26			-3906 May 25 j 05:43	0° \mathfrak{Y}	
max. Earth dist.	-3911 Aug 12 j 23:15	29° \mathfrak{S} 08'06	2.50777 AU		-3906 Jul 11 j 12:18	0° \mathfrak{B}	
	-3911 Aug 14 j 04:56	0° \mathfrak{Q}		asc. node	-3906 Jul 12 j 13:47	0° \mathfrak{B} 39'06	
					-3906 Aug 31 j 15:24	0° \mathfrak{H}	
conjunction	-3911 Sep 17 j 01:16	24° \mathfrak{Q} 11'25	0°43'59		-3906 Nov 03 j 15:26	0° \mathfrak{S}	
minimum elong	-3911 Sep 17 j 03:08	24° \mathfrak{Q} 14'50	0°44'04	retrograde	-3906 Dec 10 j 19:41	7° \mathfrak{S} 04'08	
	-3911 Sep 24 j 23:36	0° \mathfrak{M}			-3905 Jan 13 j 19:06	30° \mathfrak{R} \mathfrak{H}	
	-3911 Nov 03 j 23:01	0° \mathfrak{L}		opposition	-3905 Jan 17 j 20:13	28° \mathfrak{H} 27'49	4°59'17
morning rise	-3911 Nov 11 j 07:13	5° \mathfrak{L} 37'08		greatest brilliancy	-3905 Jan 18 j 23:44	28° \mathfrak{H} 01'18	-1.5m
desc. node	-3911 Nov 24 j 20:59	16° \mathfrak{L} 04'42		min. Earth dist.	-3905 Jan 23 j 04:54	26° \mathfrak{H} 23'54	0.61989 AU
	-3911 Dec 12 j 19:30	0° \mathfrak{M}		direct	-3905 Feb 27 j 21:03	18° \mathfrak{H} 32'15	
	-3910 Jan 20 j 07:54	0° \mathfrak{J}			-3905 Apr 16 j 01:14	0° \mathfrak{S}	
	-3910 Feb 28 j 09:25	0° \mathfrak{Z}			-3905 Jun 10 j 12:27	0° \mathfrak{Q}	
	-3910 Apr 09 j 23:47	0° \mathfrak{W}		desc. node	-3905 Jul 17 j 15:16	24° \mathfrak{Q} 46'25	
	-3910 May 23 j 09:09	0° \mathfrak{H}			-3905 Jul 25 j 00:29	0° \mathfrak{M}	
	-3910 Jul 11 j 05:35	0° \mathfrak{Y}			-3905 Sep 03 j 14:34	0° \mathfrak{L}	
retrograde	-3910 Sep 30 j 12:07	28° \mathfrak{Y} 28'56			-3905 Oct 12 j 11:17	0° \mathfrak{M}	
asc. node	-3910 Oct 07 j 13:28	28° \mathfrak{Y} 08'51			-3905 Nov 19 j 23:20	0° \mathfrak{J}	
min. Earth dist.	-3910 Nov 07 j 07:55	19° \mathfrak{Y} 28'08	0.65534 AU		-3905 Dec 29 j 03:59	0° \mathfrak{Z}	
opposition	-3910 Nov 09 j 13:10	18° \mathfrak{Y} 34'31	1°15'12	evening set	-3904 Jan 23 j 17:33	19° \mathfrak{Z} 00'32	
greatest brilliancy	-3910 Nov 09 j 08:58	18° \mathfrak{Y} 38'45	-1.4m		-3904 Feb 07 j 20:17	0° \mathfrak{W}	
direct	-3910 Dec 18 j 23:50	9° \mathfrak{Y} 08'07					

Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style.

conjunction	-3904 Mar 21 j 12:13	0° Υ 01'40	0°-38'-18
minimum elong	-3904 Mar 21 j 14:02	0° Υ 04'46	0°38'23
	-3904 Mar 21 j 11:15	0° Υ	
max. Earth dist.	-3904 Apr 19 j 03:11	19° Υ 24'14	2.57689 AU
	-3904 May 05 j 03:10	0° Υ	
morning rise	-3904 May 13 j 16:56	5° Υ 37'04	
asc. node	-3904 May 29 j 10:47	15° Υ 49'47	
	-3904 Jun 20 j 14:39	0° Υ	
	-3904 Aug 07 j 17:15	0° Υ	
	-3904 Sep 27 j 00:57	0° Υ	
	-3904 Nov 22 j 13:54	0° Υ	
retrograde	-3903 Jan 25 j 22:48	18° Υ 14'01	
opposition	-3903 Mar 01 j 23:08	11° Υ 02'32	4°30'38
greatest brilliancy	-3903 Mar 03 j 20:19	10° Υ 22'36	-2.0m
min. Earth dist.	-3903 Mar 10 j 06:00	8° Υ 07'46	0.51108 AU
direct	-3903 Apr 09 j 14:14	2° Υ 14'03	
desc. node	-3903 Jun 03 j 14:38	18° Υ 32'55	
	-3903 Jun 24 j 02:31	0° Υ	
	-3903 Aug 08 j 07:52	0° Υ	
	-3903 Sep 18 j 05:04	0° Υ	
	-3903 Oct 28 j 00:56	0° Υ	
	-3903 Dec 07 j 07:42	0° Υ	
	-3902 Jan 17 j 22:51	0° Υ	
	-3902 Mar 02 j 08:32	0° Υ	
evening set	-3902 Mar 15 j 15:24	8° Υ 56'20	
asc. node	-3902 Apr 16 j 07:48	29° Υ 52'38	
	-3902 Apr 16 j 12:18	0° Υ	
conjunction	-3902 May 05 j 11:09	12° Υ 18'59	0°10'53
minimum elong	-3902 May 05 j 10:42	12° Υ 18'15	0°10'55
behind sun begin	-3902 May 04 j 19:47	11° Υ 54'10	
behind sun end	-3902 May 06 j 01:36	12° Υ 42'20	
max. Earth dist.	-3902 May 16 j 09:54	19° Υ 22'30	2.65068 AU
	-3902 Jun 01 j 23:31	0° Υ	
morning rise	-3902 Jun 21 j 23:53	12° Υ 45'48	
	-3902 Jul 19 j 03:30	0° Υ	
	-3902 Sep 04 j 13:51	0° Υ	
	-3902 Oct 22 j 09:12	0° Υ	
	-3902 Dec 10 j 15:53	0° Υ	
	-3901 Feb 03 j 21:37	0° Υ	
retrograde	-3901 Apr 04 j 00:31	16° Υ 42'07	
desc. node	-3901 Apr 21 j 15:04	14° Υ 47'47	
opposition	-3901 May 04 j 19:49	11° Υ 28'58	0°-57'-25
greatest brilliancy	-3901 May 05 j 01:10	11° Υ 25'14	-2.8m
min. Earth dist.	-3901 May 09 j 10:22	10° Υ 11'55	0.39185 AU
direct	-3901 Jun 06 j 01:06	5° Υ 42'07	
	-3901 Aug 13 j 15:30	0° Υ	
	-3901 Sep 29 j 23:54	0° Υ	
	-3901 Nov 13 j 03:13	0° Υ	
	-3901 Dec 27 j 06:36	0° Υ	
	-3900 Feb 10 j 09:36	0° Υ	
asc. node	-3900 Mar 03 j 05:45	14° Υ 14'36	
	-3900 Mar 27 j 16:02	0° Υ	
evening set	-3900 Apr 25 j 19:13	18° Υ 37'25	
	-3900 May 13 j 16:00	0° Υ	
max. Earth dist.	-3900 Jun 08 j 03:02	16° Υ 12'48	2.67077 AU
conjunction	-3900 Jun 12 j 04:09	18° Υ 47'38	0°50'50
minimum elong	-3900 Jun 12 j 02:52	18° Υ 45'35	0°50'56
	-3900 Jun 29 j 16:43	0° Υ	
morning rise	-3900 Jul 27 j 11:32	17° Υ 53'45	
	-3900 Aug 15 j 02:15	0° Υ	
	-3900 Sep 29 j 11:59	0° Υ	
	-3900 Nov 12 j 22:17	0° Υ	
	-3900 Dec 26 j 15:48	0° Υ	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 1

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

conjunction	-3900 Jun 12 j 04:09	18°♄47'38	0°50'50		-3895 Mar 08 j 15:45	0°♄	
minimum elong	-3900 Jun 12 j 02:52	18°♄45'35	0°50'56		-3895 Apr 18 j 15:33	0°≈	
	-3900 Jun 29 j 16:43	0°♂			-3895 Jun 02 j 01:05	0°♂	
morning rise	-3900 Jul 27 j 11:32	17°♂53'45			-3895 Jul 25 j 05:30	0°♂	
	-3900 Aug 15 j 02:15	0°♄		retrograde	-3895 Sep 16 j 17:59	14°♂40'27	
	-3900 Sep 29 j 11:59	0°♂		min. Earth dist.	-3895 Oct 22 j 23:26	6°♂11'37	0.63276 AU
	-3900 Nov 12 j 22:17	0°♂		asc. node	-3895 Oct 24 j 04:27	5°♂42'32	
	-3900 Dec 26 j 15:48	0°♂		opposition	-3895 Oct 26 j 15:40	4°♂43'01	0°05'53
	-3899 Feb 08 j 08:25	0°♂		greatest brilliancy	-3895 Oct 26 j 15:06	4°♂43'35	-1.5m
desc. node	-3899 Mar 08 j 16:50	18°♂59'01			-3895 Nov 08 j 06:02	30°♂	
	-3899 Mar 25 j 21:18	0°♂		direct	-3895 Dec 04 j 03:33	25°♂36'24	
	-3899 May 24 j 05:28	0°♄			-3894 Jan 01 j 17:15	0°♂	
retrograde	-3899 Jun 18 j 07:09	4°♄10'08			-3894 Mar 11 j 06:08	0°♂	
	-3899 Jul 13 j 13:34	30°♂			-3894 May 02 j 13:45	0°♂	
min. Earth dist.	-3899 Jul 15 j 01:33	29°♂33'12	0.41257 AU		-3894 Jun 19 j 03:29	0°♄	
greatest brilliancy	-3899 Jul 20 j 04:06	27°♂58'38	-2.6m		-3894 Aug 02 j 10:30	0°♂	
opposition	-3899 Jul 22 j 03:24	27°♂21'48	-6°-30'-59	evening set	-3894 Aug 25 j 22:56	16°♂43'29	
direct	-3899 Aug 21 j 23:03	21°♂39'58		max. Earth dist.	-3894 Sep 12 j 12:01	29°♂32'36	2.43155 AU
	-3899 Sep 29 j 15:34	0°♄			-3894 Sep 13 j 02:51	0°♂	
	-3899 Nov 28 j 10:16	0°≈					
	-3898 Jan 17 j 20:14	0°♂		conjunction	-3894 Oct 20 j 13:56	28°♂15'16	0°06'23
asc. node	-3898 Jan 19 j 04:15	0°♂48'45		minimum elong	-3894 Oct 20 j 14:23	28°♂16'08	0°06'24
	-3898 Mar 07 j 16:55	0°♂		behind sun begin	-3894 Oct 19 j 15:03	27°♂31'23	
	-3898 Apr 24 j 23:53	0°♂		behind sun end	-3894 Oct 21 j 13:43	29°♂00'54	
evening set	-3898 Jun 03 j 07:25	24°♂47'45			-3894 Oct 22 j 20:28	0°♂	
	-3898 Jun 11 j 11:00	0°♂		desc. node	-3894 Oct 29 j 12:44	5°♂08'52	
max. Earth dist.	-3898 Jul 02 j 14:02	13°♂36'59	2.63692 AU		-3894 Nov 30 j 10:08	0°♂	
				morning rise	-3894 Dec 22 j 16:04	17°♂27'40	
conjunction	-3898 Jul 19 j 22:02	24°♂56'46	1°10'29		-3893 Jan 07 j 16:18	0°♂	
minimum elong	-3898 Jul 19 j 21:39	24°♂56'08	1°10'39		-3893 Feb 15 j 12:00	0°♄	
	-3898 Jul 27 j 13:48	0°♄			-3893 Mar 27 j 18:17	0°≈	
morning rise	-3898 Sep 04 j 01:33	25°♄55'16			-3893 May 09 j 08:26	0°♂	
	-3898 Sep 10 j 00:02	0°♂			-3893 Jun 24 j 11:59	0°♂	
	-3898 Oct 22 j 17:33	0°♂			-3893 Aug 16 j 23:07	0°♂	
	-3898 Dec 03 j 00:22	0°♂		asc. node	-3893 Sep 11 j 05:08	11°♂00'45	
	-3897 Jan 12 j 07:49	0°♂		retrograde	-3893 Oct 21 j 16:17	19°♂31'52	
desc. node	-3897 Jan 24 j 16:20	9°♂15'59		opposition	-3893 Nov 30 j 13:34	9°♂51'19	2°48'24
	-3897 Feb 21 j 09:05	0°♂		greatest brilliancy	-3893 Nov 30 j 12:05	9°♂52'48	-1.3m
	-3897 Apr 03 j 09:00	0°♄		min. Earth dist.	-3893 Nov 30 j 15:09	9°♂49'43	0.67168 AU
	-3897 May 17 j 20:22	0°≈		direct	-3892 Jan 10 j 02:08	0°♂03'04	
	-3897 Jul 18 j 19:11	0°♂			-3892 Apr 07 j 00:46	0°♂	
retrograde	-3897 Aug 09 j 13:20	3°♂06'03			-3892 May 28 j 07:40	0°♄	
	-3897 Aug 30 j 05:31	30°♂			-3892 Jul 12 j 17:14	0°♂	
min. Earth dist.	-3897 Sep 09 j 20:54	26°≈24'15	0.53595 AU		-3892 Aug 23 j 15:23	0°♂	
opposition	-3897 Sep 16 j 23:27	23°≈41'43	-3°-28'-46	desc. node	-3892 Sep 15 j 10:35	17°♂05'35	
greatest brilliancy	-3897 Sep 15 j 19:31	24°≈08'25	-1.9m		-3892 Oct 02 j 06:49	0°♂	
direct	-3897 Oct 22 j 05:09	15°≈52'25		evening set	-3892 Oct 22 j 10:15	15°♂40'01	
asc. node	-3897 Dec 07 j 03:36	26°≈30'26			-3892 Nov 09 j 16:08	0°♂	
	-3897 Dec 15 j 13:29	0°♂			-3892 Dec 17 j 18:43	0°♂	
	-3896 Feb 12 j 10:51	0°♂					
	-3896 Apr 04 j 00:21	0°♂		conjunction	-3892 Dec 26 j 12:40	6°♂50'31	-1°00'-9
	-3896 May 22 j 18:10	0°♂		minimum elong	-3892 Dec 26 j 09:58	6°♂45'16	1°00'17
	-3896 Jul 08 j 04:02	0°♄			-3891 Jan 25 j 12:30	0°♄	
evening set	-3896 Jul 11 j 15:53	2°♄19'18		max. Earth dist.	-3891 Feb 11 j 17:42	13°♄00'57	2.40486 AU
max. Earth dist.	-3896 Jul 30 j 00:57	14°♄41'19	2.55235 AU	morning rise	-3891 Mar 03 j 12:35	27°♄40'41	
	-3896 Aug 21 j 06:10	0°♂			-3891 Mar 06 j 16:50	0°≈	
					-3891 Apr 17 j 22:40	0°♂	
conjunction	-3896 Aug 29 j 11:47	5°♂46'32	0°59'22		-3891 Jun 01 j 17:18	0°♂	
minimum elong	-3896 Aug 29 j 13:18	5°♂49'12	0°59'29		-3891 Jul 19 j 16:48	0°♂	
	-3896 Oct 02 j 05:00	0°♂		asc. node	-3891 Jul 29 j 04:28	5°♂37'21	
morning rise	-3896 Oct 19 j 21:09	13°♂02'49			-3891 Sep 11 j 15:29	0°♂	
	-3896 Nov 11 j 10:29	0°♂		retrograde	-3891 Nov 25 j 12:57	23°♂22'09	
desc. node	-3896 Dec 11 j 14:05	23°♂04'18		opposition	-3890 Jan 03 j 07:31	14°♂22'59	4°35'59
	-3896 Dec 20 j 13:30	0°♂		greatest brilliancy	-3890 Jan 04 j 00:57	14°♂05'54	-1.3m
	-3895 Jan 28 j 08:05	0°♂		min. Earth dist.	-3890 Jan 07 j 04:47	12°♂51'36	0.64692 AU

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 2

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

direct	-3890 Feb 13 j 12:40	4° Π 21'56		evening set	-3885 Apr 11 j 02:41	4° Υ 04'50	
	-3890 May 01 j 19:32	0° \mathfrak{S}			-3885 May 21 j 12:29	0° \mathfrak{B}	
	-3890 Jun 20 j 12:25	0° Ω					
	-3890 Aug 02 j 18:03	0° \mathfrak{M}		conjunction	-3885 May 29 j 11:27	5° \mathfrak{B} 04'36	0°37'14
desc. node	-3890 Aug 03 j 08:13	0° \mathfrak{M} 25'42		minimum elong	-3885 May 29 j 10:16	5° \mathfrak{B} 02'43	0°37'19
	-3890 Sep 11 j 20:50	0° \mathfrak{A}		max. Earth dist.	-3885 May 31 j 02:13	6° \mathfrak{B} 06'23	2.66940 AU
	-3890 Oct 20 j 11:31	0° \mathfrak{M}			-3885 Jul 07 j 12:53	0° Π	
	-3890 Nov 27 j 18:47	0° \mathfrak{A}		morning rise	-3885 Jul 14 j 07:15	4° Π 19'42	
evening set	-3890 Dec 30 j 07:06	25° \mathfrak{A} 04'59			-3885 Aug 23 j 05:19	0° \mathfrak{S}	
	-3889 Jan 05 j 18:24	0° \mathfrak{C}			-3885 Oct 08 j 07:28	0° Ω	
	-3889 Feb 15 j 05:22	0° \approx			-3885 Nov 22 j 23:17	0° \mathfrak{M}	
					-3884 Jan 07 j 18:58	0° \mathfrak{A}	
conjunction	-3889 Mar 01 j 16:19	10° \approx 23'28	0°-55'-3		-3884 Feb 24 j 12:12	0° \mathfrak{M}	
minimum elong	-3889 Mar 01 j 18:31	10° \approx 27'23	0°55'11	desc. node	-3884 Mar 25 j 08:42	16° \mathfrak{M} 44'51	
	-3889 Mar 29 j 15:36	0° \mathfrak{H}			-3884 Apr 25 j 13:24	0° \mathfrak{A}	
max. Earth dist.	-3889 Apr 07 j 07:13	5° \mathfrak{H} 56'18	2.53397 AU	retrograde	-3884 May 22 j 06:03	4° \mathfrak{A} 25'11	
morning rise	-3889 Apr 27 j 08:19	19° \mathfrak{H} 28'51			-3884 Jun 18 j 14:11	30° \mathfrak{R} \mathfrak{M}	
	-3889 May 13 j 05:08	0° Υ		min. Earth dist.	-3884 Jun 18 j 23:37	29° \mathfrak{M} 53'36	0.38211 AU
asc. node	-3889 Jun 16 j 03:21	21° Υ 57'05		opposition	-3884 Jun 22 j 13:26	28° \mathfrak{M} 54'49	-5°-45'-17
	-3889 Jun 28 j 20:25	0° \mathfrak{B}		greatest brilliancy	-3884 Jun 21 j 14:32	29° \mathfrak{M} 10'33	-2.8m
	-3889 Aug 16 j 17:06	0° Π		direct	-3884 Jul 22 j 10:10	23° \mathfrak{M} 52'08	
	-3889 Oct 08 j 12:28	0° \mathfrak{S}			-3884 Aug 23 j 13:58	0° \mathfrak{A}	
	-3889 Dec 23 j 23:43	0° Ω			-3884 Oct 22 j 14:32	0° \mathfrak{C}	
retrograde	-3888 Jan 06 j 20:57	1° Ω 06'42			-3884 Dec 10 j 10:25	0° \approx	
	-3888 Jan 20 j 01:40	30° \mathfrak{R} \mathfrak{S}			-3883 Jan 26 j 21:02	0° \mathfrak{H}	
opposition	-3888 Feb 12 j 06:00	23° \mathfrak{S} 16'39	5°02'27	asc. node	-3883 Feb 04 j 19:45	5° \mathfrak{H} 39'36	
greatest brilliancy	-3888 Feb 13 j 23:52	22° \mathfrak{S} 37'55	-1.7m		-3883 Mar 15 j 09:57	0° Υ	
min. Earth dist.	-3888 Feb 19 j 15:40	20° \mathfrak{S} 32'45	0.55946 AU		-3883 May 02 j 01:46	0° \mathfrak{B}	
direct	-3888 Mar 23 j 05:27	13° \mathfrak{S} 49'46		evening set	-3883 May 19 j 11:27	10° \mathfrak{B} 59'53	
	-3888 May 18 j 02:07	0° Ω			-3883 Jun 18 j 07:24	0° Π	
desc. node	-3888 Jun 20 j 07:14	18° Ω 50'10		max. Earth dist.	-3883 Jun 22 j 18:58	2° Π 52'38	2.65664 AU
	-3888 Jul 07 j 12:28	0° \mathfrak{M}					
	-3888 Aug 18 j 20:59	0° \mathfrak{A}		conjunction	-3883 Jul 05 j 01:33	10° Π 47'25	1°05'52
	-3888 Sep 27 j 14:27	0° \mathfrak{M}		minimum elong	-3883 Jul 05 j 00:39	10° Π 45'57	1°06'00
	-3888 Nov 05 j 17:07	0° \mathfrak{A}			-3883 Aug 03 j 11:33	0° \mathfrak{S}	
	-3888 Dec 15 j 10:18	0° \mathfrak{C}		morning rise	-3883 Aug 19 j 11:08	10° \mathfrak{S} 36'11	
	-3887 Jan 25 j 13:55	0° \approx			-3883 Sep 17 j 05:03	0° Ω	
evening set	-3887 Feb 24 j 23:22	21° \approx 20'08			-3883 Oct 30 j 10:54	0° \mathfrak{M}	
	-3887 Mar 09 j 14:19	0° \mathfrak{H}			-3883 Dec 11 j 10:21	0° \mathfrak{A}	
					-3882 Jan 21 j 13:56	0° \mathfrak{M}	
conjunction	-3887 Apr 19 j 01:08	27° \mathfrak{H} 04'57	0°-8'-4	desc. node	-3882 Feb 10 j 09:38	14° \mathfrak{M} 30'39	
minimum elong	-3887 Apr 19 j 01:29	27° \mathfrak{H} 05'32	0°08'05		-3882 Mar 03 j 17:00	0° \mathfrak{A}	
behind sun begin	-3887 Apr 18 j 07:02	26° \mathfrak{H} 35'11			-3882 Apr 15 j 13:06	0° \mathfrak{C}	
behind sun end	-3887 Apr 19 j 19:56	27° \mathfrak{H} 35'52			-3882 Jun 05 j 02:21	0° \approx	
	-3887 Apr 23 j 11:43	0° Υ		retrograde	-3882 Jul 22 j 12:10	13° \approx 12'08	
asc. node	-3887 May 03 j 00:53	6° Υ 14'38		min. Earth dist.	-3882 Aug 20 j 15:09	7° \approx 23'06	0.48691 AU
max. Earth dist.	-3887 May 06 j 09:29	8° Υ 25'50	2.62804 AU	greatest brilliancy	-3882 Aug 26 j 20:34	5° \approx 08'44	-2.2m
morning rise	-3887 Jun 07 j 07:48	29° Υ 00'25		opposition	-3882 Aug 28 j 15:05	4° \approx 30'12	-4°-58'-25
	-3887 Jun 08 j 21:06	0° \mathfrak{B}			-3882 Sep 11 j 15:17	30° \mathfrak{R} \mathfrak{C}	
	-3887 Jul 26 j 06:38	0° Π		direct	-3882 Oct 01 j 05:28	27° \mathfrak{C} 25'31	
	-3887 Sep 12 j 11:26	0° \mathfrak{S}			-3882 Oct 21 j 21:59	0° \approx	
	-3887 Nov 01 j 04:35	0° Ω		asc. node	-3882 Dec 23 j 18:40	26° \approx 08'17	
	-3887 Dec 25 j 23:18	0° \mathfrak{M}			-3882 Dec 31 j 01:08	0° \mathfrak{H}	
retrograde	-3886 Mar 05 j 03:55	20° \mathfrak{M} 59'34			-3881 Feb 21 j 20:52	0° Υ	
opposition	-3886 Apr 06 j 14:55	15° \mathfrak{M} 02'26	2°02'45		-3881 Apr 12 j 17:56	0° \mathfrak{B}	
greatest brilliancy	-3886 Apr 07 j 14:10	14° \mathfrak{M} 44'26	-2.5m		-3881 May 30 j 20:46	0° Π	
min. Earth dist.	-3886 Apr 14 j 08:33	12° \mathfrak{M} 39'32	0.43170 AU	evening set	-3881 Jun 26 j 23:20	17° Π 25'37	
desc. node	-3886 May 08 j 08:04	8° \mathfrak{M} 01'06			-3881 Jul 16 j 02:37	0° \mathfrak{S}	
direct	-3886 May 11 j 17:40	7° \mathfrak{M} 56'18		max. Earth dist.	-3881 Jul 19 j 04:45	2° \mathfrak{S} 03'06	2.59134 AU
	-3886 Jul 15 j 01:30	0° \mathfrak{A}					
	-3886 Aug 30 j 18:00	0° \mathfrak{M}		conjunction	-3881 Aug 13 j 11:31	19° \mathfrak{S} 05'54	1°08'09
	-3886 Oct 12 j 02:57	0° \mathfrak{A}		minimum elong	-3881 Aug 13 j 12:18	19° \mathfrak{S} 07'14	1°08'18
	-3886 Nov 23 j 00:32	0° \mathfrak{C}			-3881 Aug 29 j 07:08	0° Ω	
	-3885 Jan 04 j 19:40	0° \approx		morning rise	-3881 Oct 01 j 02:15	23° Ω 11'50	
	-3885 Feb 18 j 01:52	0° \mathfrak{H}			-3881 Oct 10 j 12:10	0° \mathfrak{M}	
asc. node	-3885 Mar 20 j 21:36	20° \mathfrak{H} 18'56			-3881 Nov 20 j 01:57	0° \mathfrak{A}	
	-3885 Apr 04 j 19:12	0° Υ		desc. node	-3881 Dec 29 j 09:01	29° \mathfrak{A} 51'12	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 3

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3881 Dec 29 j 13:37	0°♄				-3875 Mar 14 j 01:49	0°♄		
	-3880 Feb 06 j 16:39	0°♂				-3875 May 13 j 03:16	0°♄		
	-3880 Mar 17 j 09:43	0°♂				-3875 Jun 29 j 09:52	0°♄		
	-3880 Apr 28 j 01:42	0°♂				-3875 Aug 10 j 22:39	0°♄		
	-3880 Jun 13 j 10:53	0°♂			desc. node	-3875 Aug 20 j 01:44	6°♄44'06		
retrograde	-3880 Sep 02 j 09:41	29°♂56'22				-3875 Sep 19 j 19:03	0°♄		
min. Earth dist.	-3880 Oct 06 j 20:51	22°♂04'20	0.60107 AU		greatest brilliancy	-3875 Oct 28 j 10:58	0°♄09'26	1.2m	
opposition	-3880 Oct 11 j 23:13	20°♂02'40	-1°-11'-28			-3875 Oct 28 j 06:10	0°♄		
greatest brilliancy	-3880 Oct 11 j 15:51	20°♂10'00	-1.6m		evening set	-3875 Dec 03 j 18:33	28°♄42'18		
asc. node	-3880 Nov 09 j 18:10	11°♂50'09				-3875 Dec 05 j 10:16	0°♂		
direct	-3880 Nov 18 j 07:45	11°♂20'58				-3874 Jan 13 j 06:19	0°♂		
	-3879 Jan 22 j 17:16	0°♂							
	-3879 Mar 20 j 22:59	0°♂			conjunction	-3874 Feb 06 j 07:34	18°♂04'06	-1°-5'-53	
	-3879 May 10 j 09:58	0°♄			minimum elong	-3874 Feb 06 j 08:50	18°♂06'28	1°06'03	
	-3879 Jun 26 j 09:47	0°♄				-3874 Feb 22 j 13:17	0°♂		
evening set	-3879 Aug 07 j 05:26	28°♄21'33			max. Earth dist.	-3874 Mar 22 j 18:11	20°♂10'44	2.48522 AU	
	-3879 Aug 09 j 13:48	0°♄				-3874 Apr 05 j 20:18	0°♂		
max. Earth dist.	-3879 Aug 22 j 12:27	9°♄07'51	2.48112 AU		morning rise	-3874 Apr 08 j 02:40	1°♂33'51		
	-3879 Sep 20 j 08:01	0°♄				-3874 May 20 j 09:30	0°♂		
					asc. node	-3874 Jul 02 j 18:49	27°♂46'46		
conjunction	-3879 Sep 28 j 11:28	6°♄01'35	0°32'05			-3874 Jul 06 j 08:22	0°♂		
minimum elong	-3879 Sep 28 j 13:10	6°♄04'45	0°32'08			-3874 Aug 25 j 09:28	0°♄		
	-3879 Oct 30 j 05:39	0°♄				-3874 Oct 22 j 00:52	0°♄		
desc. node	-3879 Nov 15 j 06:19	12°♄20'03			retrograde	-3874 Dec 20 j 05:03	15°♄46'19		
morning rise	-3879 Nov 25 j 08:23	20°♄09'13			opposition	-3873 Jan 26 j 16:37	7°♄24'56	5°05'54	
	-3879 Dec 07 j 23:43	0°♄			greatest brilliancy	-3873 Jan 28 j 01:44	6°♄53'23	-1.5m	
	-3878 Jan 15 j 09:41	0°♂			min. Earth dist.	-3873 Feb 01 j 19:31	5°♄05'07	0.60065 AU	
	-3878 Feb 23 j 08:25	0°♂				-3873 Feb 17 j 12:28	30°♄		
	-3878 Apr 04 j 18:18	0°♂			direct	-3873 Mar 08 j 10:45	27°♄36'26		
	-3878 May 17 j 17:36	0°♂				-3873 Mar 28 j 09:03	0°♄		
	-3878 Jul 04 j 04:26	0°♂				-3873 Jun 03 j 04:52	0°♄		
	-3878 Sep 03 j 17:11	0°♂			desc. node	-3873 Jul 08 j 00:01	22°♄20'53		
asc. node	-3878 Sep 27 j 19:25	5°♂52'16				-3873 Jul 19 j 01:41	0°♄		
retrograde	-3878 Oct 08 j 06:56	6°♂33'08				-3873 Aug 29 j 03:44	0°♄		
	-3878 Nov 08 j 23:13	30°♄				-3873 Oct 07 j 06:27	0°♄		
min. Earth dist.	-3878 Nov 15 j 21:15	27°♄16'48	0.66375 AU			-3873 Nov 14 j 22:41	0°♂		
opposition	-3878 Nov 17 j 07:20	26°♄42'29	1°51'55			-3873 Dec 24 j 06:39	0°♂		
greatest brilliancy	-3878 Nov 17 j 03:00	26°♄46'50	-1.3m			-3872 Feb 03 j 01:36	0°♂		
direct	-3878 Dec 27 j 04:11	17°♄07'13			evening set	-3872 Feb 05 j 09:31	1°♂40'27		
	-3877 Feb 17 j 20:44	0°♂				-3872 Mar 16 j 18:38	0°♂		
	-3877 Apr 18 j 04:36	0°♄							
	-3877 Jun 06 j 11:44	0°♄			conjunction	-3872 Apr 01 j 08:01	10°♂35'27	0°-27'-28	
	-3877 Jul 21 j 07:43	0°♄			minimum elong	-3872 Apr 01 j 09:20	10°♂37'41	0°27'31	
	-3877 Sep 01 j 02:18	0°♄			max. Earth dist.	-3872 Apr 25 j 18:27	26°♂54'17	2.59721 AU	
evening set	-3877 Sep 28 j 17:21	20°♄46'32				-3872 Apr 30 j 11:10	0°♂		
desc. node	-3877 Oct 03 j 03:36	24°♄09'43			asc. node	-3872 May 19 j 16:38	12°♄33'06		
	-3877 Oct 10 j 17:46	0°♄			morning rise	-3872 May 22 j 22:44	14°♄39'32		
	-3877 Nov 18 j 03:58	0°♄				-3872 Jun 15 j 20:44	0°♂		
						-3872 Aug 02 j 15:26	0°♄		
conjunction	-3877 Nov 29 j 16:42	9°♄04'43	0°-39'-2			-3872 Sep 20 j 23:58	0°♄		
minimum elong	-3877 Nov 29 j 13:43	8°♄58'51	0°39'07			-3872 Nov 13 j 01:02	0°♄		
max. Earth dist.	-3877 Nov 29 j 11:58	8°♄55'25	2.37579 AU		retrograde	-3871 Feb 07 j 15:46	29°♄27'52		
	-3877 Dec 26 j 07:09	0°♂			opposition	-3871 Mar 13 j 20:06	22°♄41'14	3°53'27	
	-3876 Feb 03 j 00:44	0°♂			greatest brilliancy	-3871 Mar 15 j 14:11	22°♄05'25	-2.2m	
morning rise	-3876 Feb 05 j 19:51	2°♂07'52			min. Earth dist.	-3871 Mar 22 j 07:48	19°♄49'10	0.48217 AU	
	-3876 Mar 14 j 04:24	0°♂			direct	-3871 Apr 20 j 09:38	14°♄23'29		
	-3876 Apr 25 j 11:06	0°♂			desc. node	-3871 May 24 j 23:49	21°♄39'13		
	-3876 Jun 09 j 12:44	0°♂				-3871 Jun 12 j 11:58	0°♄		
	-3876 Jul 28 j 16:30	0°♂				-3871 Jul 31 j 17:02	0°♄		
asc. node	-3876 Aug 14 j 20:28	9°♂34'27				-3871 Sep 11 j 18:38	0°♄		
	-3876 Sep 26 j 17:52	0°♄				-3871 Oct 22 j 05:30	0°♂		
retrograde	-3876 Nov 11 j 04:53	10°♄13'31				-3871 Dec 01 j 22:37	0°♂		
opposition	-3876 Dec 20 j 12:45	0°♄55'29	4°01'26			-3870 Jan 12 j 21:22	0°♂		
greatest brilliancy	-3876 Dec 20 j 21:11	0°♄47'07	-1.3m			-3870 Feb 25 j 12:49	0°♂		
	-3876 Dec 22 j 20:41	30°♄			evening set	-3870 Mar 25 j 14:29	18°♂42'07		
min. Earth dist.	-3876 Dec 22 j 21:53	29°♂58'48	0.66424 AU		asc. node	-3870 Apr 06 j 13:54	26°♂33'56		
direct	-3875 Jan 30 j 15:31	20°♂55'34				-3870 Apr 11 j 20:08	0°♂		

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 4

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

conjunction	-3870 May 14 j 09:40	21° Υ 03'19	0°21'08			-3865 Jun 30 j 09:50	0° H	
minimum elong	-3870 May 14 j 08:52	21° Υ 02'03	0°21'11	retrograde		-3865 Aug 18 j 23:43	13° H 40'00	
max. Earth dist.	-3870 May 21 j 22:25	25° Υ 53'07	2.65973 AU	min. Earth dist.		-3865 Sep 20 j 11:49	6° H 31'00	0.56105 AU
	-3870 May 28 j 08:42	0° B		opposition		-3865 Sep 26 j 21:58	4° H 01'01	-2°-37'-9
morning rise	-3870 Jun 30 j 04:19	20° B 55'34		greatest brilliancy		-3865 Sep 26 j 02:22	4° H 20'08	-1.8m
	-3870 Jul 14 j 10:38	0° II				-3865 Oct 07 j 23:53	30° R \approx	
	-3870 Aug 30 j 13:23	0° S		direct		-3865 Nov 01 j 22:30	25° \approx 50'55	
	-3870 Oct 16 j 15:13	0° Q		asc. node		-3865 Nov 27 j 09:45	29° \approx 30'36	
	-3870 Dec 03 j 05:44	0° M				-3865 Nov 29 j 04:53	0° H	
	-3869 Jan 22 j 06:06	0° A				-3864 Feb 05 j 13:37	0° Υ	
	-3869 Mar 28 j 19:55	0° M				-3864 Mar 29 j 14:48	0° B	
desc. node	-3869 Apr 12 j 02:16	2° M 50'23				-3864 May 17 j 21:28	0° II	
retrograde	-3869 Apr 21 j 20:44	3° M 26'23				-3864 Jul 03 j 12:15	0° S	
	-3869 May 16 j 06:39	30° R A		evening set		-3864 Jul 21 j 00:01	11° S 41'35	
opposition	-3869 May 22 j 08:32	28° A 24'11	-2°-56'-56	max. Earth dist.		-3864 Aug 06 j 18:56	23° S 09'19	2.52850 AU
greatest brilliancy	-3869 May 22 j 13:14	28° A 21'02	-2.9m			-3864 Aug 16 j 15:36	0° Q	
min. Earth dist.	-3869 May 24 j 04:03	27° A 55'02	0.37950 AU					
direct	-3869 Jun 22 j 02:08	23° A 10'05		conjunction		-3864 Sep 08 j 19:38	16° Q 24'25	0°51'23
	-3869 Jul 25 j 14:51	0° M		minimum elong		-3864 Sep 08 j 21:25	16° Q 27'38	0°51'29
	-3869 Sep 20 j 16:09	0° J				-3864 Sep 27 j 13:08	0° M	
	-3869 Nov 06 j 04:03	0° S		morning rise		-3864 Nov 01 j 04:24	25° M 50'14	
	-3869 Dec 21 j 10:04	0° \approx				-3864 Nov 06 j 16:00	0° A	
	-3868 Feb 05 j 04:15	0° H		desc. node		-3864 Dec 02 j 00:12	19° A 26'19	
asc. node	-3868 Feb 22 j 10:33	11° H 10'07				-3864 Dec 15 j 15:30	0° M	
	-3868 Mar 22 j 19:28	0° Υ				-3863 Jan 23 j 06:19	0° J	
evening set	-3868 May 04 j 13:15	27° Υ 10'11				-3863 Mar 03 j 09:39	0° S	
	-3868 May 09 j 00:16	0° B				-3863 Apr 13 j 02:11	0° \approx	
max. Earth dist.	-3868 Jun 13 j 11:26	22° B 33'50	2.66809 AU			-3863 May 26 j 18:16	0° H	
						-3863 Jul 15 j 19:24	0° Υ	
conjunction	-3868 Jun 20 j 12:38	27° B 04'14	0°57'21	retrograde		-3863 Sep 24 j 17:26	23° Υ 07'32	
minimum elong	-3868 Jun 20 j 11:25	27° B 02'18	0°57'28	asc. node		-3863 Oct 14 j 10:35	20° Υ 26'29	
	-3868 Jun 25 j 02:23	0° II		min. Earth dist.		-3863 Oct 31 j 20:17	14° Υ 20'30	0.64640 AU
morning rise	-3868 Aug 04 j 17:14	26° II 16'43		opposition		-3863 Nov 03 j 17:22	13° Υ 10'55	0°47'14
	-3868 Aug 10 j 09:41	0° S		greatest brilliancy		-3863 Nov 03 j 14:00	13° Υ 14'18	-1.4m
	-3868 Sep 24 j 13:11	0° Q		direct		-3863 Dec 12 j 18:11	3° Υ 52'51	
	-3868 Nov 07 j 11:59	0° M				-3862 Mar 04 j 00:13	0° B	
	-3868 Dec 20 j 11:47	0° A				-3862 Apr 27 j 02:23	0° II	
	-3867 Feb 01 j 00:16	0° M				-3862 Jun 14 j 05:01	0° S	
desc. node	-3867 Feb 27 j 02:55	18° M 16'25				-3862 Jul 28 j 16:47	0° Q	
	-3867 Mar 16 j 05:51	0° J		evening set		-3862 Sep 06 j 12:34	28° Q 35'37	
	-3867 May 03 j 03:52	0° S				-3862 Sep 08 j 10:18	0° M	
retrograde	-3867 Jul 01 j 15:37	19° S 39'11		max. Earth dist.		-3862 Sep 28 j 22:17	15° M 19'53	2.40595 AU
min. Earth dist.	-3867 Jul 28 j 21:27	14° S 41'56	0.43693 AU			-3862 Oct 18 j 03:35	0° A	
greatest brilliancy	-3867 Aug 03 j 17:26	12° S 47'02	-2.4m	desc. node		-3862 Oct 19 j 21:44	1° A 21'10	
opposition	-3867 Aug 05 j 19:52	12° S 05'18	-6°-11'-52					
direct	-3867 Sep 06 j 13:28	5° S 53'58		conjunction		-3862 Nov 03 j 07:45	12° A 31'19	0°-10'-17
	-3867 Nov 18 j 23:59	0° \approx		minimum elong		-3862 Nov 03 j 06:56	12° A 29'43	0°10'19
asc. node	-3866 Jan 09 j 09:23	28° \approx 47'07		behind sun begin		-3862 Nov 02 j 10:18	11° A 49'38	
	-3866 Jan 11 j 10:54	0° H		behind sun end		-3862 Nov 04 j 03:33	13° A 09'50	
	-3866 Mar 02 j 08:54	0° Υ				-3862 Nov 25 j 16:06	0° M	
	-3866 Apr 20 j 03:22	0° B				-3861 Jan 02 j 20:56	0° J	
	-3866 Jun 06 j 19:42	0° II		morning rise		-3861 Jan 07 j 22:35	3° J 57'42	
evening set	-3866 Jun 11 j 20:42	3° II 13'28				-3861 Feb 10 j 15:15	0° S	
max. Earth dist.	-3866 Jul 08 j 11:16	20° II 26'37	2.62283 AU			-3861 Mar 22 j 19:22	0° \approx	
	-3866 Jul 22 j 23:39	0° S				-3861 May 04 j 04:53	0° H	
						-3861 Jun 18 j 19:03	0° Υ	
conjunction	-3866 Jul 28 j 15:37	3° S 45'45	1°11'06			-3861 Aug 09 j 00:53	0° B	
minimum elong	-3866 Jul 28 j 15:39	3° S 45'48	1°11'15	asc. node		-3861 Sep 01 j 11:17	11° B 37'50	
	-3866 Sep 05 j 08:02	0° Q		retrograde		-3861 Oct 29 j 10:53	27° B 20'24	
morning rise	-3866 Sep 13 j 10:56	5° Q 38'05		opposition		-3861 Dec 08 j 04:10	17° B 46'48	3°17'42
	-3866 Oct 17 j 20:54	0° M		greatest brilliancy		-3861 Dec 08 j 05:32	17° B 45'26	-1.3m
	-3866 Nov 27 j 21:13	0° A		min. Earth dist.		-3861 Dec 09 j 01:21	17° B 25'37	0.67175 AU
	-3865 Jan 06 j 20:35	0° M		direct		-3860 Jan 17 j 22:54	7° B 53'10	
desc. node	-3865 Jan 15 j 01:38	6° M 12'47				-3860 Mar 30 j 08:21	0° II	
	-3865 Feb 15 j 12:13	0° J				-3860 May 22 j 16:01	0° S	
	-3865 Mar 27 j 21:31	0° S				-3860 Jul 07 j 15:13	0° Q	
	-3865 May 09 j 21:38	0° \approx				-3860 Aug 18 j 18:05	0° M	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 5

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

desc. node	-3860 Sep 05 j 18:54	13° \mathbb{M} 26'59		behind sun begin	-3855 Apr 27 j 17:49	5° Υ 49'27	
	-3860 Sep 27 j 11:15	0° \mathfrak{A}		behind sun end	-3855 Apr 29 j 10:32	6° Υ 55'41	
	-3860 Nov 04 j 21:01	0° \mathbb{M}		max. Earth dist.	-3855 May 12 j 07:04	15° Υ 15'49	2.64163 AU
evening set	-3860 Nov 06 j 11:28	1° \mathbb{M} 15'44			-3855 Jun 04 j 05:28	0° \mathfrak{B}	
	-3860 Dec 12 j 23:47	0° \mathfrak{A}		morning rise	-3855 Jun 15 j 19:49	7° \mathfrak{B} 24'10	
					-3855 Jul 21 j 11:14	0° \mathbb{I}	
conjunction	-3859 Jan 11 j 04:53	22° \mathfrak{A} 41'43	-1°-6'-12		-3855 Sep 07 j 04:42	0° \mathfrak{B}	
minimum elong	-3859 Jan 11 j 03:36	22° \mathfrak{A} 39'15	1°06'23		-3855 Oct 25 j 17:16	0° \mathcal{O}	
	-3859 Jan 20 j 17:53	0° \mathfrak{B}			-3855 Dec 15 j 18:43	0° \mathbb{M}	
max. Earth dist.	-3859 Mar 01 j 07:09	29° \mathfrak{B} 32'20	2.43305 AU		-3854 Feb 18 j 05:30	0° \mathfrak{A}	
	-3859 Mar 01 j 22:19	0° \approx		retrograde	-3854 Mar 21 j 13:17	5° \mathfrak{A} 21'53	
morning rise	-3859 Mar 17 j 06:28	11° \approx 05'07		opposition	-3854 Apr 21 j 23:17	29° \mathbb{M} 51'25	0°28'18
	-3859 Apr 13 j 03:27	0° \mathfrak{H}			-3854 Apr 21 j 11:30	30° \mathfrak{R} \mathbb{M}	
	-3859 May 27 j 18:25	0° Υ		greatest brilliancy	-3854 Apr 22 j 04:17	29° \mathbb{M} 47'47	-2.7m
	-3859 Jul 14 j 05:47	0° \mathfrak{B}		min. Earth dist.	-3854 Apr 28 j 07:03	28° \mathbb{M} 00'54	0.40743 AU
asc. node	-3859 Jul 19 j 11:04	3° \mathfrak{B} 10'06		desc. node	-3854 Apr 28 j 17:59	27° \mathbb{M} 53'06	
	-3859 Sep 04 j 06:06	0° \mathbb{I}		direct	-3854 May 25 j 12:23	23° \mathbb{M} 30'11	
	-3859 Nov 17 j 16:24	0° \mathfrak{B}			-3854 Jun 26 j 15:49	0° \mathfrak{A}	
retrograde	-3859 Dec 04 j 03:56	1° \mathfrak{B} 33'13			-3854 Aug 21 j 13:04	0° \mathbb{M}	
	-3859 Dec 19 j 16:36	30° \mathfrak{R} \mathbb{I}			-3854 Oct 05 j 00:57	0° \mathfrak{A}	
opposition	-3858 Jan 11 j 12:33	22° \mathbb{I} 46'03	4°50'44		-3854 Nov 16 j 23:36	0° \mathfrak{B}	
greatest brilliancy	-3858 Jan 12 j 11:29	22° \mathbb{I} 23'44	-1.4m		-3854 Dec 30 j 09:53	0° \approx	
min. Earth dist.	-3858 Jan 16 j 05:06	20° \mathbb{I} 56'39	0.63325 AU		-3853 Feb 13 j 01:50	0° \mathfrak{H}	
direct	-3858 Feb 21 j 15:42	12° \mathbb{I} 47'01		asc. node	-3853 Mar 11 j 03:13	17° \mathfrak{H} 05'52	
	-3858 Apr 22 j 21:28	0° \mathfrak{B}			-3853 Mar 31 j 01:07	0° Υ	
	-3858 Jun 14 j 09:23	0° \mathcal{O}		evening set	-3853 Apr 20 j 04:36	12° Υ 56'36	
desc. node	-3858 Jul 24 j 18:13	27° \mathcal{O} 26'31			-3853 May 16 j 21:33	0° \mathfrak{B}	
	-3858 Jul 28 j 07:59	0° \mathbb{M}		max. Earth dist.	-3853 Jun 05 j 11:48	12° \mathfrak{B} 29'16	2.67119 AU
	-3858 Sep 06 j 17:33	0° \mathfrak{A}					
	-3858 Oct 15 j 11:27	0° \mathbb{M}		conjunction	-3853 Jun 06 j 23:00	13° \mathfrak{B} 25'22	0°45'29
	-3858 Nov 22 j 20:48	0° \mathfrak{A}		minimum elong	-3853 Jun 06 j 21:44	13° \mathfrak{B} 23'21	0°45'35
	-3858 Dec 31 j 22:19	0° \mathfrak{B}			-3853 Jul 02 j 21:59	0° \mathbb{I}	
evening set	-3857 Jan 13 j 11:22	9° \mathfrak{B} 25'33		morning rise	-3853 Jul 22 j 10:22	12° \mathbb{I} 31'36	
	-3857 Feb 10 j 10:55	0° \approx			-3853 Aug 18 j 10:43	0° \mathfrak{B}	
					-3853 Oct 03 j 03:49	0° \mathcal{O}	
conjunction	-3857 Mar 13 j 20:16	22° \approx 18'32	0°-45'-51		-3853 Nov 17 j 02:14	0° \mathbb{M}	
minimum elong	-3857 Mar 13 j 22:21	22° \approx 22'09	0°45'57		-3853 Dec 31 j 15:03	0° \mathfrak{A}	
	-3857 Mar 24 j 22:28	0° \mathfrak{H}			-3852 Feb 14 j 15:32	0° \mathbb{M}	
max. Earth dist.	-3857 Apr 14 j 23:51	14° \mathfrak{H} 20'54	2.55866 AU	desc. node	-3852 Mar 15 j 19:27	19° \mathbb{M} 08'17	
morning rise	-3857 May 07 j 11:23	29° \mathfrak{H} 19'34			-3852 Apr 03 j 09:14	0° \mathfrak{A}	
	-3857 May 08 j 11:56	0° Υ		retrograde	-3852 Jun 07 j 01:24	21° \mathfrak{A} 59'00	
asc. node	-3857 Jun 06 j 08:16	18° Υ 45'06		min. Earth dist.	-3852 Jul 03 j 21:23	17° \mathfrak{A} 31'15	0.39604 AU
	-3857 Jun 23 j 23:49	0° \mathfrak{B}		greatest brilliancy	-3852 Jul 08 j 02:30	16° \mathfrak{A} 17'27	-2.7m
	-3857 Aug 11 j 08:21	0° \mathbb{I}		opposition	-3852 Jul 09 j 17:40	15° \mathfrak{A} 48'38	-6°-26'-38
	-3857 Oct 01 j 12:17	0° \mathfrak{B}		direct	-3852 Aug 08 j 23:37	10° \mathfrak{A} 28'13	
	-3857 Dec 01 j 01:39	0° \mathcal{O}			-3852 Oct 11 j 03:09	0° \mathfrak{B}	
retrograde	-3856 Jan 17 j 21:47	11° \mathcal{O} 01'15			-3852 Dec 03 j 05:46	0° \approx	
opposition	-3856 Feb 22 j 13:48	3° \mathcal{O} 31'18	4°47'57		-3851 Jan 21 j 02:54	0° \mathfrak{H}	
greatest brilliancy	-3856 Feb 24 j 10:15	2° \mathcal{O} 51'05	-1.9m	asc. node	-3851 Jan 26 j 01:21	3° \mathfrak{H} 03'48	
min. Earth dist.	-3856 Mar 01 j 12:39	0° \mathcal{O} 39'28	0.53357 AU		-3851 Mar 10 j 07:51	0° Υ	
	-3856 Mar 03 j 10:10	30° \mathfrak{R} \mathfrak{B}			-3851 Apr 27 j 07:43	0° \mathfrak{B}	
direct	-3856 Apr 01 j 20:50	24° \mathfrak{B} 23'14		evening set	-3851 May 28 j 00:02	19° \mathfrak{B} 21'39	
	-3856 May 02 j 11:25	0° \mathcal{O}			-3851 Jun 13 j 16:36	0° \mathbb{I}	
desc. node	-3856 Jun 10 j 17:52	18° \mathcal{O} 26'28		max. Earth dist.	-3851 Jun 28 j 10:04	9° \mathbb{I} 28'15	2.64673 AU
	-3856 Jun 29 j 20:21	0° \mathbb{M}					
	-3856 Aug 12 j 14:16	0° \mathfrak{A}		conjunction	-3851 Jul 13 j 13:15	19° \mathbb{I} 17'39	1°09'03
	-3856 Sep 21 j 21:38	0° \mathbb{M}		minimum elong	-3851 Jul 13 j 12:38	19° \mathbb{I} 16'39	1°09'12
	-3856 Oct 31 j 08:29	0° \mathfrak{A}			-3851 Jul 29 j 20:34	0° \mathfrak{B}	
	-3856 Dec 10 j 07:49	0° \mathfrak{B}		morning rise	-3851 Aug 28 j 06:46	19° \mathfrak{B} 40'12	
	-3855 Jan 20 j 16:08	0° \approx			-3851 Sep 12 j 10:51	0° \mathcal{O}	
	-3855 Mar 04 j 20:14	0° \mathfrak{H}			-3851 Oct 25 j 10:20	0° \mathbb{M}	
evening set	-3855 Mar 07 j 20:04	2° \mathfrak{H} 01'56			-3851 Dec 06 j 00:48	0° \mathfrak{A}	
	-3855 Apr 18 j 19:51	0° Υ			-3850 Jan 15 j 16:41	0° \mathbb{M}	
asc. node	-3855 Apr 23 j 05:21	2° Υ 52'35		desc. node	-3850 Jan 31 j 19:20	11° \mathbb{M} 58'10	
					-3850 Feb 25 j 03:36	0° \mathfrak{A}	
conjunction	-3855 Apr 28 j 14:18	6° Υ 22'47	0°03'07		-3850 Apr 07 j 17:55	0° \mathfrak{B}	
minimum elong	-3855 Apr 28 j 14:10	6° Υ 22'34	0°03'08		-3850 May 23 j 19:20	0° \approx	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 6

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

retrograde	-3850 Aug 02 j 02:00	25° \approx 18'19			-3845 Aug 27 j 08:11	0° \mathfrak{M}	
min. Earth dist.	-3850 Sep 01 j 10:15	18° \approx 59'10	0.51433 AU	desc. node	-3845 Sep 23 j 13:50	20° \mathfrak{M} 27'13	
opposition	-3850 Sep 08 j 23:23	16° \approx 10'01	-4°-7'-47		-3845 Oct 06 j 00:31	0° $\underline{\mathfrak{L}}$	
greatest brilliancy	-3850 Sep 07 j 12:54	16° \approx 42'23	-2.0m	evening set	-3845 Oct 12 j 08:09	4° $\underline{\mathfrak{L}}$ 53'11	
direct	-3850 Oct 13 j 11:38	8° \approx 39'31			-3845 Nov 13 j 10:29	0° \mathfrak{M}	
asc. node	-3850 Dec 14 j 00:31	26° \approx 08'58					
	-3850 Dec 22 j 02:51	0° \mathfrak{H}		conjunction	-3845 Dec 15 j 07:31	25° \mathfrak{M} 06'43	0°-52'-25
	-3849 Feb 15 j 20:10	0° \mathfrak{Y}		minimum elong	-3845 Dec 15 j 04:18	25° \mathfrak{M} 00'23	0°52'32
	-3849 Apr 07 j 15:02	0° \mathfrak{B}			-3845 Dec 21 j 12:55	0° \mathfrak{J}	
	-3849 May 26 j 02:40	0° \mathfrak{I}		max. Earth dist.	-3844 Jan 20 j 14:53	23° \mathfrak{J} 23'31	2.38568 AU
evening set	-3849 Jul 05 j 20:51	26° \mathfrak{I} 17'26			-3844 Jan 29 j 05:47	0° \mathfrak{B}	
	-3849 Jul 11 j 11:36	0° \mathfrak{B}		morning rise	-3844 Feb 21 j 06:51	17° \mathfrak{B} 23'53	
max. Earth dist.	-3849 Jul 25 j 21:59	9° \mathfrak{B} 38'12	2.57055 AU		-3844 Mar 09 j 08:30	0° \approx	
					-3844 Apr 20 j 12:58	0° \mathfrak{H}	
conjunction	-3849 Aug 23 j 00:49	28° \mathfrak{B} 52'02	1°03'50		-3844 Jun 04 j 08:29	0° \mathfrak{Y}	
minimum elong	-3849 Aug 23 j 02:02	28° \mathfrak{B} 54'10	1°03'58		-3844 Jul 22 j 16:18	0° \mathfrak{B}	
	-3849 Aug 24 j 15:54	0° \mathfrak{Q}		asc. node	-3844 Aug 05 j 01:13	7° \mathfrak{B} 46'14	
	-3849 Oct 05 j 18:18	0° \mathfrak{M}			-3844 Sep 16 j 08:33	0° \mathfrak{I}	
morning rise	-3849 Oct 12 j 01:23	4° \mathfrak{M} 36'04		retrograde	-3844 Nov 19 j 08:51	18° \mathfrak{I} 09'51	
	-3849 Nov 15 j 04:08	0° $\underline{\mathfrak{L}}$		opposition	-3844 Dec 28 j 09:26	9° \mathfrak{I} 01'42	4°22'33
desc. node	-3849 Dec 19 j 17:10	26° $\underline{\mathfrak{L}}$ 20'40		greatest brilliancy	-3844 Dec 28 j 22:41	8° \mathfrak{I} 48'38	-1.3m
	-3849 Dec 24 j 11:12	0° \mathfrak{M}		min. Earth dist.	-3844 Dec 31 j 14:16	7° \mathfrak{I} 45'55	0.65597 AU
	-3848 Feb 01 j 09:11	0° \mathfrak{J}			-3843 Jan 26 j 06:25	30° \mathfrak{R} \mathfrak{B}	
	-3848 Mar 11 j 20:04	0° \mathfrak{B}		direct	-3843 Feb 07 j 13:48	29° \mathfrak{B} 00'28	
	-3848 Apr 22 j 00:27	0° \approx			-3843 Feb 20 j 11:41	0° \mathfrak{I}	
	-3848 Jun 05 j 23:47	0° \mathfrak{H}			-3843 May 06 j 05:33	0° \mathfrak{B}	
	-3848 Aug 01 j 17:17	0° \mathfrak{Y}			-3843 Jun 23 j 20:10	0° \mathfrak{Q}	
retrograde	-3848 Sep 10 j 17:47	8° \mathfrak{Y} 57'20			-3843 Aug 05 j 19:12	0° \mathfrak{M}	
min. Earth dist.	-3848 Oct 16 j 04:37	0° \mathfrak{Y} 44'25	0.61965 AU	desc. node	-3843 Aug 10 j 11:11	3° \mathfrak{M} 24'36	
	-3848 Oct 18 j 01:03	30° \mathfrak{R} \mathfrak{H}			-3843 Sep 14 j 19:57	0° $\underline{\mathfrak{L}}$	
opposition	-3848 Oct 20 j 12:27	29° \mathfrak{H} 00'26	0°-25'-36		-3843 Oct 23 j 09:15	0° \mathfrak{M}	
greatest brilliancy	-3848 Oct 20 j 10:08	29° \mathfrak{H} 02'44	-1.5m		-3843 Nov 30 j 14:42	0° \mathfrak{J}	
asc. node	-3848 Oct 31 j 01:11	25° \mathfrak{H} 01'06		evening set	-3843 Dec 18 j 22:26	14° \mathfrak{J} 14'19	
direct	-3848 Nov 27 j 12:33	20° \mathfrak{H} 04'23			-3842 Jan 08 j 11:57	0° \mathfrak{B}	
	-3847 Jan 11 j 13:48	0° \mathfrak{Y}			-3842 Feb 17 j 19:54	0° \approx	
	-3847 Mar 14 j 18:25	0° \mathfrak{B}					
	-3847 May 05 j 06:22	0° \mathfrak{I}		conjunction	-3842 Feb 19 j 21:18	1° \approx 29'43	-1°00'-38
	-3847 Jun 21 j 15:04	0° \mathfrak{B}		minimum elong	-3842 Feb 19 j 23:20	1° \approx 33'24	1°00'46
	-3847 Aug 04 j 22:10	0° \mathfrak{Q}		max. Earth dist.	-3842 Apr 01 j 05:04	0° \mathfrak{H} 03'17	2.51270 AU
evening set	-3847 Aug 17 j 15:27	8° \mathfrak{Q} 58'02			-3842 Apr 01 j 03:10	0° \mathfrak{H}	
max. Earth dist.	-3847 Sep 02 j 10:32	20° \mathfrak{Q} 18'43	2.45361 AU	morning rise	-3842 Apr 19 j 08:18	12° \mathfrak{H} 27'43	
	-3847 Sep 15 j 16:19	0° \mathfrak{M}			-3842 May 15 j 15:00	0° \mathfrak{Y}	
				asc. node	-3842 Jun 23 j 00:05	24° \mathfrak{Y} 45'37	
conjunction	-3847 Oct 10 j 15:45	18° \mathfrak{M} 40'21	0°18'07		-3842 Jul 01 j 07:48	0° \mathfrak{B}	
minimum elong	-3847 Oct 10 j 16:54	18° \mathfrak{M} 42'33	0°18'08		-3842 Aug 19 j 13:40	0° \mathfrak{I}	
	-3847 Oct 25 j 12:25	0° $\underline{\mathfrak{L}}$			-3842 Oct 12 j 21:01	0° \mathfrak{B}	
desc. node	-3847 Nov 05 j 15:52	8° $\underline{\mathfrak{L}}$ 34'55		retrograde	-3842 Dec 30 j 01:04	24° \mathfrak{B} 47'35	
	-3847 Dec 03 j 04:14	0° \mathfrak{M}		opposition	-3841 Feb 04 j 22:36	16° \mathfrak{B} 42'30	5°06'12
morning rise	-3847 Dec 10 j 10:26	5° \mathfrak{M} 41'05		greatest brilliancy	-3841 Feb 06 j 12:49	16° \mathfrak{B} 06'36	-1.6m
greatest brilliancy	-3847 Dec 11 j 02:07	6° \mathfrak{M} 11'47	1.2m	min. Earth dist.	-3841 Feb 11 j 18:47	14° \mathfrak{B} 08'37	0.57899 AU
	-3846 Jan 10 j 11:43	0° \mathfrak{J}		direct	-3841 Mar 17 j 07:11	7° \mathfrak{B} 04'16	
	-3846 Feb 18 j 08:02	0° \mathfrak{B}			-3841 May 25 j 16:11	0° \mathfrak{Q}	
	-3846 Mar 30 j 14:32	0° \approx		desc. node	-3841 Jun 28 j 09:59	20° \mathfrak{Q} 25'10	
	-3846 May 12 j 06:24	0° \mathfrak{H}			-3841 Jul 12 j 17:35	0° \mathfrak{M}	
	-3846 Jun 27 j 18:41	0° \mathfrak{Y}			-3841 Aug 23 j 11:49	0° $\underline{\mathfrak{L}}$	
	-3846 Aug 22 j 07:27	0° \mathfrak{B}			-3841 Oct 01 j 22:21	0° \mathfrak{M}	
asc. node	-3846 Sep 18 j 01:58	10° \mathfrak{B} 06'02			-3841 Nov 09 j 19:30	0° \mathfrak{J}	
retrograde	-3846 Oct 16 j 00:19	14° \mathfrak{B} 29'12			-3841 Dec 19 j 07:32	0° \mathfrak{B}	
opposition	-3846 Nov 24 j 23:12	4° \mathfrak{B} 43'36	2°25'47		-3840 Jan 29 j 05:58	0° \approx	
min. Earth dist.	-3846 Nov 24 j 08:32	4° \mathfrak{B} 58'21	0.66942 AU	evening set	-3840 Feb 17 j 08:40	13° \approx 33'42	
greatest brilliancy	-3846 Nov 24 j 19:59	4° \mathfrak{B} 46'50	-1.3m		-3840 Mar 12 j 01:41	0° \mathfrak{H}	
	-3846 Dec 07 j 08:33	30° \mathfrak{R} \mathfrak{Y}					
direct	-3845 Jan 04 j 05:09	25° \mathfrak{Y} 00'45		conjunction	-3840 Apr 11 j 15:27	20° \mathfrak{H} 37'33	0°-16'-14
	-3845 Feb 03 j 23:11	0° \mathfrak{B}		minimum elong	-3840 Apr 11 j 16:12	20° \mathfrak{H} 38'49	0°16'17
	-3845 Apr 11 j 18:58	0° \mathfrak{I}			-3840 Apr 25 j 19:40	0° \mathfrak{Y}	
	-3845 Jun 01 j 05:17	0° \mathfrak{B}		max. Earth dist.	-3840 May 02 j 00:17	4° \mathfrak{Y} 03'47	2.61523 AU
	-3845 Jul 16 j 10:26	0° \mathfrak{Q}		asc. node	-3840 May 09 j 22:06	9° \mathfrak{Y} 13'26	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 7

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

morning rise	-3840 May 31 j 21:11	23° Υ 24'59		greatest brilliancy	-3835 Aug 17 j 06:57	26° Ξ 22'29	-2.3m
	-3840 Jun 11 j 04:05	0° \mathcal{B}		opposition	-3835 Aug 19 j 06:12	25° Ξ 41'05	-5°-33'-56
	-3840 Jul 28 j 16:30	0° Π		direct	-3835 Sep 21 j 01:31	18° Ξ 59'13	
	-3840 Sep 15 j 07:34	0° \mathfrak{S}			-3835 Nov 06 j 01:43	0° \approx	
	-3840 Nov 05 j 04:21	0° Ω		asc. node	-3835 Dec 30 j 15:41	27° \approx 18'23	
	-3839 Jan 03 j 17:09	0° \mathfrak{M}			-3834 Jan 04 j 11:03	0° \mathfrak{H}	
retrograde	-3839 Feb 21 j 11:53	11° \mathfrak{M} 36'57			-3834 Feb 24 j 20:24	0° Υ	
opposition	-3839 Mar 26 j 18:34	5° \mathfrak{M} 17'11	2°58'16		-3834 Apr 15 j 05:14	0° \mathcal{B}	
greatest brilliancy	-3839 Mar 28 j 04:23	4° \mathfrak{M} 49'47	-2.3m		-3834 Jun 02 j 03:44	0° Π	
min. Earth dist.	-3839 Apr 04 j 02:23	2° \mathfrak{M} 36'26	0.45379 AU	evening set	-3834 Jun 20 j 10:59	11° Π 43'46	
	-3839 Apr 13 j 07:46	30° $\mathcal{R}\Omega$		max. Earth dist.	-3834 Jul 14 j 13:41	27° Π 27'58	2.60647 AU
direct	-3839 May 02 j 02:32	27° Ω 36'33			-3834 Jul 18 j 09:39	0° \mathfrak{S}	
desc. node	-3839 May 15 j 10:42	28° Ω 47'57					
	-3839 May 21 j 04:17	0° \mathfrak{M}		conjunction	-3834 Aug 06 j 13:44	12° \mathfrak{S} 48'59	1°10'03
	-3839 Jul 22 j 17:14	0° \mathfrak{L}		minimum elong	-3834 Aug 06 j 14:12	12° \mathfrak{S} 49'46	1°10'12
	-3839 Sep 04 j 19:01	0° \mathfrak{M}			-3834 Aug 31 j 16:54	0° Ω	
	-3839 Oct 16 j 03:23	0° \mathfrak{X}		morning rise	-3834 Sep 23 j 06:27	15° Ω 48'40	
	-3839 Nov 26 j 09:48	0° \mathfrak{Z}			-3834 Oct 13 j 02:17	0° \mathfrak{M}	
	-3838 Jan 07 j 17:57	0° \approx			-3834 Nov 22 j 21:13	0° \mathfrak{L}	
	-3838 Feb 20 j 15:57	0° \mathfrak{H}			-3833 Jan 01 j 14:09	0° \mathfrak{M}	
asc. node	-3838 Mar 27 j 19:00	23° \mathfrak{H} 14'39		desc. node	-3833 Jan 05 j 12:02	2° \mathfrak{M} 58'55	
evening set	-3838 Apr 04 j 04:21	28° \mathfrak{H} 03'58			-3833 Feb 09 j 21:57	0° \mathfrak{X}	
	-3838 Apr 07 j 03:41	0° Υ			-3833 Mar 21 j 20:20	0° \mathfrak{Z}	
					-3833 May 02 j 21:49	0° \approx	
conjunction	-3838 May 23 j 03:13	29° Υ 36'01	0°30'46		-3833 Jun 19 j 15:46	0° \mathfrak{H}	
minimum elong	-3838 May 23 j 02:09	29° Υ 34'20	0°30'51	retrograde	-3833 Aug 27 j 23:33	23° \mathfrak{H} 38'08	
	-3838 May 23 j 18:13	0° \mathcal{B}		min. Earth dist.	-3833 Sep 30 j 14:11	16° \mathfrak{H} 04'36	0.58415 AU
max. Earth dist.	-3838 May 27 j 08:52	2° \mathcal{B} 18'25	2.66611 AU	opposition	-3833 Oct 06 j 07:24	13° \mathfrak{H} 49'08	-1°-46'-43
morning rise	-3838 Jul 08 j 07:37	29° \mathcal{B} 03'46		greatest brilliancy	-3833 Oct 05 j 19:13	14° \mathfrak{H} 01'10	-1.7m
	-3838 Jul 09 j 18:52	0° Π		direct	-3833 Nov 12 j 01:59	5° \mathfrak{H} 20'44	
	-3838 Aug 25 j 15:40	0° \mathfrak{S}		asc. node	-3833 Nov 17 j 15:12	5° \mathfrak{H} 32'17	
	-3838 Oct 11 j 03:26	0° Ω			-3832 Jan 28 j 18:31	0° Υ	
	-3838 Nov 26 j 13:03	0° \mathfrak{M}			-3832 Mar 23 j 23:28	0° \mathcal{B}	
	-3837 Jan 12 j 19:05	0° \mathfrak{L}			-3832 May 12 j 22:23	0° Π	
	-3837 Mar 05 j 04:26	0° \mathfrak{M}			-3832 Jun 28 j 19:22	0° \mathfrak{S}	
desc. node	-3837 Apr 02 j 11:21	13° \mathfrak{M} 09'21		evening set	-3832 Jul 30 j 15:42	21° \mathfrak{S} 26'19	
retrograde	-3837 May 09 j 22:29	21° \mathfrak{M} 10'39			-3832 Aug 12 j 00:22	0° Ω	
min. Earth dist.	-3837 Jun 08 j 07:29	16° \mathfrak{M} 20'49	0.37707 AU	max. Earth dist.	-3832 Aug 15 j 09:20	2° Ω 21'35	2.50291 AU
opposition	-3837 Jun 09 j 13:06	16° \mathfrak{M} 01'07	-4°-44'-50				
greatest brilliancy	-3837 Jun 09 j 04:50	16° \mathfrak{M} 06'37	-2.9m	conjunction	-3832 Sep 19 j 16:48	27° Ω 40'03	0°41'11
direct	-3837 Jul 09 j 11:22	11° \mathfrak{M} 01'25		minimum elong	-3832 Sep 19 j 18:39	27° Ω 43'25	0°41'16
	-3837 Sep 08 j 04:03	0° \mathfrak{X}			-3832 Sep 22 j 21:09	0° \mathfrak{M}	
	-3837 Oct 29 j 08:26	0° \mathfrak{Z}			-3832 Nov 01 j 21:51	0° \mathfrak{L}	
	-3837 Dec 15 j 06:20	0° \approx		morning rise	-3832 Nov 14 j 10:04	9° \mathfrak{L} 35'02	
	-3836 Jan 30 j 20:02	0° \mathfrak{H}		desc. node	-3832 Nov 22 j 09:50	15° \mathfrak{L} 44'49	
asc. node	-3836 Feb 12 j 16:46	8° \mathfrak{H} 13'56			-3832 Dec 10 j 18:44	0° \mathfrak{M}	
	-3836 Mar 17 j 21:59	0° Υ			-3831 Jan 18 j 06:35	0° \mathfrak{X}	
	-3836 May 04 j 08:27	0° \mathcal{B}			-3831 Feb 26 j 06:29	0° \mathfrak{Z}	
evening set	-3836 May 13 j 03:15	5° \mathcal{B} 33'37			-3831 Apr 07 j 17:41	0° \approx	
max. Earth dist.	-3836 Jun 18 j 20:40	28° \mathcal{B} 56'07	2.66280 AU		-3831 May 20 j 20:58	0° \mathfrak{H}	
	-3836 Jun 20 j 12:34	0° Π			-3831 Jul 08 j 01:31	0° Υ	
					-3831 Sep 17 j 16:56	0° \mathcal{B}	
conjunction	-3836 Jun 28 j 20:21	5° Π 20'40	1°02'43	retrograde	-3831 Oct 02 j 13:47	1° \mathcal{B} 21'30	
minimum elong	-3836 Jun 28 j 19:18	5° Π 18'58	1°02'52	asc. node	-3831 Oct 04 j 16:15	1° \mathcal{B} 19'43	
	-3836 Aug 05 j 18:38	0° \mathfrak{S}			-3831 Oct 16 j 15:33	30° $\mathcal{R}\Upsilon$	
morning rise	-3836 Aug 13 j 02:07	4° \mathfrak{S} 49'11		min. Earth dist.	-3831 Nov 09 j 12:06	22° Υ 18'04	0.65716 AU
	-3836 Sep 19 j 17:00	0° Ω		opposition	-3831 Nov 11 j 14:21	21° Υ 27'25	1°25'55
	-3836 Nov 02 j 06:29	0° \mathfrak{M}		greatest brilliancy	-3831 Nov 11 j 09:48	21° Υ 32'01	-1.3m
	-3836 Dec 14 j 16:07	0° \mathfrak{L}		direct	-3831 Dec 21 j 02:48	11° Υ 59'23	
	-3835 Jan 25 j 08:27	0° \mathfrak{M}			-3830 Feb 23 j 13:36	0° \mathcal{B}	
desc. node	-3835 Feb 17 j 12:06	16° \mathfrak{M} 40'40			-3830 Apr 21 j 08:27	0° Π	
	-3835 Mar 08 j 04:43	0° \mathfrak{X}			-3830 Jun 09 j 04:13	0° \mathfrak{S}	
	-3835 Apr 21 j 11:03	0° \mathfrak{Z}			-3830 Jul 23 j 22:00	0° Ω	
	-3835 Jun 19 j 15:58	0° \approx			-3830 Sep 03 j 17:13	0° \mathfrak{M}	
retrograde	-3835 Jul 13 j 22:48	3° \approx 55'59		evening set	-3830 Sep 18 j 18:17	11° \mathfrak{M} 12'53	
	-3835 Aug 06 j 12:53	30° $\mathcal{R}\mathfrak{Z}$		desc. node	-3830 Oct 10 j 07:10	27° \mathfrak{M} 35'41	
min. Earth dist.	-3835 Aug 11 j 03:00	28° \mathfrak{Z} 30'45	0.46434 AU		-3830 Oct 13 j 10:13	0° \mathfrak{L}	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 8

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

max. Earth dist.	-3830 Oct 24 j 12:31	8° Ω 34'54	2.38453 AU			-3825 Aug 06 j 04:20	0° Π	
						-3825 Sep 25 j 04:12	0° Θ	
conjunction	-3830 Nov 17 j 21:29	27° Ω 37'58	0°-27'00			-3825 Nov 19 j 10:44	0° Ω	
minimum elong	-3830 Nov 17 j 19:18	27° Ω 33'40	0°27'04	retrograde		-3824 Jan 29 j 19:34	21° Ω 36'36	
	-3830 Nov 20 j 21:48	0° \mathbb{M}		opposition		-3824 Mar 04 j 17:01	14° Ω 29'34	4°21'50
	-3830 Dec 29 j 01:27	0° \mathcal{A}		greatest brilliancy		-3824 Mar 06 j 13:27	13° Ω 50'34	-2.0m
morning rise	-3829 Jan 24 j 08:34	20° \mathcal{A} 27'49		min. Earth dist.		-3824 Mar 13 j 02:04	11° Ω 34'27	0.50548 AU
	-3829 Feb 05 j 18:38	0° \mathcal{Z}		direct		-3824 Apr 12 j 03:19	5° Ω 46'47	
	-3829 Mar 17 j 21:22	0° \approx		desc. node		-3824 Jun 01 j 02:45	19° Ω 37'47	
	-3829 Apr 29 j 03:27	0° \mathcal{H}				-3824 Jun 20 j 11:59	0° \mathbb{M}	
	-3829 Jun 13 j 07:53	0° \mathcal{Y}				-3824 Aug 05 j 15:29	0° Ω	
	-3829 Aug 02 j 02:24	0° \mathcal{B}				-3824 Sep 15 j 19:37	0° \mathbb{M}	
asc. node	-3829 Aug 22 j 17:28	11° \mathcal{B} 05'16				-3824 Oct 25 j 18:14	0° \mathcal{A}	
	-3829 Oct 06 j 08:29	0° Π				-3824 Dec 05 j 01:53	0° \mathcal{Z}	
retrograde	-3829 Nov 06 j 07:51	5° Π 10'36				-3823 Jan 15 j 16:50	0° \approx	
	-3829 Dec 04 j 15:26	30° $\mathbb{R}\mathcal{B}$				-3823 Feb 28 j 01:43	0° \mathcal{H}	
opposition	-3829 Dec 15 j 20:02	25° \mathcal{B} 45'05	3°44'06	evening set		-3823 Mar 18 j 03:29	12° \mathcal{H} 08'46	
greatest brilliancy	-3829 Dec 16 j 01:01	25° \mathcal{B} 40'08	-1.3m	asc. node		-3823 Apr 13 j 11:41	29° \mathcal{H} 32'28	
min. Earth dist.	-3829 Dec 17 j 12:34	25° \mathcal{B} 04'41	0.66888 AU			-3823 Apr 14 j 04:31	0° \mathcal{Y}	
direct	-3828 Jan 25 j 19:35	15° \mathcal{B} 47'29						
	-3828 Mar 21 j 00:56	0° Π		conjunction		-3823 May 07 j 18:02	15° \mathcal{Y} 18'20	0°13'45
	-3828 May 16 j 16:03	0° Θ		minimum elong		-3823 May 07 j 17:29	15° \mathcal{Y} 17'27	0°13'47
	-3828 Jul 02 j 09:51	0° Ω		behind sun begin		-3823 May 07 j 07:32	15° \mathcal{Y} 01'24	
	-3828 Aug 13 j 19:27	0° \mathbb{M}		behind sun end		-3823 May 08 j 03:26	15° \mathcal{Y} 33'29	
desc. node	-3828 Aug 27 j 04:59	9° \mathbb{M} 55'33		max. Earth dist.		-3823 May 17 j 22:26	21° \mathcal{Y} 51'54	2.65268 AU
	-3828 Sep 22 j 15:09	0° Ω				-3823 May 30 j 14:53	0° \mathcal{B}	
	-3828 Oct 31 j 01:56	0° \mathbb{M}		morning rise		-3823 Jun 24 j 02:31	15° \mathcal{B} 37'01	
evening set	-3828 Nov 21 j 19:34	17° \mathbb{M} 07'18				-3823 Jul 16 j 18:01	0° Π	
	-3828 Dec 08 j 05:00	0° \mathcal{A}				-3823 Sep 02 j 02:45	0° Θ	
	-3827 Jan 15 j 23:17	0° \mathcal{Z}				-3823 Oct 19 j 18:00	0° Ω	
						-3823 Dec 07 j 13:47	0° \mathbb{M}	
conjunction	-3827 Jan 26 j 05:58	7° \mathcal{Z} 47'37	-1°-7'-34			-3822 Jan 30 j 01:40	0° Ω	
minimum elong	-3827 Jan 26 j 06:16	7° \mathcal{Z} 48'11	1°07'45	retrograde		-3822 Apr 07 j 20:28	21° Ω 03'59	
	-3827 Feb 25 j 03:59	0° \approx		desc. node		-3822 Apr 19 j 04:51	20° Ω 15'52	
max. Earth dist.	-3827 Mar 14 j 14:18	12° \approx 35'01	2.46196 AU	opposition		-3822 May 08 j 14:52	15° Ω 54'02	-1°-24'-53
morning rise	-3827 Mar 30 j 00:38	23° \approx 29'53		greatest brilliancy		-3822 May 08 j 21:35	15° Ω 49'23	-2.8m
	-3827 Apr 08 j 08:38	0° \mathcal{H}		min. Earth dist.		-3822 May 12 j 16:52	14° Ω 46'18	0.38868 AU
	-3827 May 22 j 21:02	0° \mathcal{Y}		direct		-3822 Jun 09 j 11:31	10° Ω 14'32	
	-3827 Jul 08 j 23:02	0° \mathcal{B}				-3822 Aug 09 j 03:38	0° \mathbb{M}	
asc. node	-3827 Jul 09 j 16:08	0° \mathcal{B} 26'25				-3822 Sep 26 j 22:18	0° \mathcal{A}	
	-3827 Aug 28 j 15:11	0° Π				-3822 Nov 10 j 11:18	0° \mathcal{Z}	
	-3827 Oct 28 j 20:01	0° Θ				-3822 Dec 24 j 18:30	0° \approx	
retrograde	-3827 Dec 13 j 04:30	10° Θ 01'20				-3821 Feb 07 j 23:01	0° \mathcal{H}	
opposition	-3826 Jan 20 j 01:50	1° Θ 27'43	5°01'03	asc. node		-3821 Mar 01 j 08:10	13° \mathcal{H} 56'10	
greatest brilliancy	-3826 Jan 21 j 06:22	1° Θ 00'13	-1.5m			-3821 Mar 26 j 06:08	0° \mathcal{Y}	
	-3826 Jan 23 j 20:48	30° $\mathbb{R}\Pi$		evening set		-3821 Apr 29 j 01:40	21° \mathcal{Y} 35'47	
min. Earth dist.	-3826 Jan 25 j 13:05	29° Π 21'25	0.61640 AU			-3821 May 12 j 06:39	0° \mathcal{B}	
direct	-3826 Mar 02 j 00:29	21° Π 33'27		max. Earth dist.		-3821 Jun 10 j 19:20	18° \mathcal{B} 47'51	2.67057 AU
	-3826 Apr 10 j 16:32	0° Θ						
	-3826 Jun 07 j 15:23	0° Ω		conjunction		-3821 Jun 15 j 08:09	21° \mathcal{B} 41'26	0°52'45
desc. node	-3826 Jul 15 j 03:20	24° Ω 44'08		minimum elong		-3821 Jun 15 j 06:52	21° \mathcal{B} 39'24	0°52'52
	-3826 Jul 22 j 15:12	0° \mathbb{M}				-3821 Jun 28 j 07:59	0° Π	
	-3826 Sep 01 j 10:16	0° Ω		morning rise		-3821 Jul 30 j 14:06	20° Π 47'03	
	-3826 Oct 10 j 09:14	0° \mathbb{M}				-3821 Aug 13 j 18:02	0° Θ	
	-3826 Nov 17 j 21:54	0° \mathcal{A}				-3821 Sep 28 j 03:40	0° Ω	
	-3826 Dec 27 j 02:00	0° \mathcal{Z}				-3821 Nov 11 j 12:45	0° \mathbb{M}	
evening set	-3825 Jan 26 j 18:23	22° \mathcal{Z} 46'58				-3821 Dec 25 j 03:16	0° Ω	
	-3825 Feb 05 j 16:53	0° \approx				-3820 Feb 06 j 13:31	0° \mathbb{M}	
	-3825 Mar 20 j 05:57	0° \mathcal{H}		desc. node		-3820 Mar 06 j 05:48	19° \mathbb{M} 25'41	
						-3820 Mar 22 j 09:55	0° \mathcal{A}	
conjunction	-3825 Mar 25 j 04:26	3° \mathcal{H} 23'22	0°-35'-30			-3820 May 15 j 15:22	0° \mathcal{Z}	
minimum elong	-3825 Mar 25 j 06:07	3° \mathcal{H} 26'16	0°35'35	retrograde		-3820 Jun 21 j 11:49	8° \mathcal{Z} 29'16	
max. Earth dist.	-3825 Apr 22 j 00:50	22° \mathcal{H} 11'30	2.58079 AU	min. Earth dist.		-3820 Jul 18 j 05:41	3° \mathcal{Z} 50'11	0.41669 AU
	-3825 May 03 j 19:49	0° \mathcal{Y}		greatest brilliancy		-3820 Jul 23 j 13:18	2° \mathcal{Z} 10'47	-2.6m
morning rise	-3825 May 17 j 01:12	8° \mathcal{Y} 39'54		opposition		-3820 Jul 25 j 13:47	1° \mathcal{Z} 32'44	-6°-29'-25
asc. node	-3825 May 27 j 13:51	15° \mathcal{Y} 29'39				-3820 Jul 30 j 15:27	30° $\mathbb{R}\mathcal{A}$	
	-3825 Jun 19 j 05:05	0° \mathcal{B}		direct		-3820 Aug 25 j 12:36	25° \mathcal{A} 45'52	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 9

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3820 Sep 21 j 06:09	0°☾	conjunction	-3815 Oct 23 j 16:16	2°♊12'29	0°02'26
	-3820 Nov 24 j 23:58	0°♊	minimum elong	-3815 Oct 23 j 16:27	2°♊12'51	0°02'25
	-3819 Jan 15 j 00:52	0°♋	behind sun begin	-3815 Oct 22 j 15:25	1°♊24'43	
asc. node	-3819 Jan 16 j 06:17	0°♋44'30	behind sun end	-3815 Oct 24 j 17:29	3°♊01'00	
	-3819 Mar 05 j 02:49	0°♌	desc. node	-3815 Oct 27 j 01:11	4°♊48'21	
	-3819 Apr 22 j 12:36	0°♍		-3815 Nov 28 j 09:45	0°♌	
evening set	-3819 Jun 05 j 12:35	27°♍43'48	morning rise	-3815 Dec 26 j 06:35	21°♌52'22	
	-3819 Jun 09 j 01:56	0°♎		-3814 Jan 05 j 15:36	0°♍	
max. Earth dist.	-3819 Jul 04 j 03:29	16°♎08'52		-3814 Feb 13 j 09:58	0°☾	
		2.63456 AU		-3814 Mar 25 j 13:49	0°♊	
conjunction	-3819 Jul 22 j 03:26	27°♎55'46		-3814 May 06 j 23:58	0°♋	
minimum elong	-3819 Jul 22 j 03:10	27°♎55'20		-3814 Jun 21 j 19:57	0°♌	
	-3819 Jul 25 j 06:42	0°♏		-3814 Aug 13 j 06:50	0°♍	
morning rise	-3819 Sep 06 j 08:52	29°♏02'22	asc. node	-3814 Sep 08 j 07:49	11°♍56'10	
	-3819 Sep 07 j 18:24	0°♐	retrograde	-3814 Oct 23 j 17:59	22°♍20'52	
	-3819 Oct 20 j 12:39	0°♑	opposition	-3814 Dec 02 j 13:58	12°♍41'19	2°57'01
	-3819 Nov 30 j 19:24	0°♒	greatest brilliancy	-3814 Dec 02 j 12:54	12°♍42'24	-1.3m
	-3818 Jan 10 j 01:56	0°♓	min. Earth dist.	-3814 Dec 02 j 18:39	12°♍36'37	0.67190 AU
desc. node	-3818 Jan 22 j 04:39	9°♓06'04	direct	-3813 Jan 12 j 03:26	2°♍52'05	
	-3818 Feb 19 j 00:57	0°♈		-3813 Apr 04 j 16:48	0°♎	
	-3818 Mar 31 j 19:53	0°☾		-3813 May 26 j 17:13	0°♏	
	-3818 May 14 j 17:25	0°♊		-3813 Jul 11 j 09:41	0°♐	
	-3818 Jul 10 j 14:02	0°♋		-3813 Aug 22 j 11:36	0°♑	
retrograde	-3818 Aug 11 j 22:52	6°♋29'30	desc. node	-3813 Sep 13 j 21:56	16°♑46'09	
	-3818 Sep 11 j 17:11	30°♋		-3813 Oct 01 j 05:09	0°♒	
min. Earth dist.	-3818 Sep 12 j 12:33	29°♋41'52	evening set	-3813 Oct 26 j 20:50	19°♒57'45	
greatest brilliancy	-3818 Sep 18 j 09:34	27°♋26'43		-3813 Nov 08 j 15:24	0°♓	
opposition	-3818 Sep 19 j 11:31	27°♋01'45		-3813 Dec 16 j 17:53	0°♈	
direct	-3818 Oct 24 j 19:38	19°♋08'26				
asc. node	-3818 Dec 04 j 06:39	27°♋38'14	conjunction	-3813 Dec 31 j 03:56	11°♈16'08	-1°-2'00
	-3818 Dec 10 j 10:38	0°♋	minimum elong	-3813 Dec 31 j 01:33	11°♈11'29	1°02'09
	-3817 Feb 09 j 08:43	0°♌		-3812 Jan 24 j 10:41	0°☾	
	-3817 Apr 02 j 08:23	0°♍	max. Earth dist.	-3812 Feb 17 j 00:26	17°☾47'33	2.41021 AU
	-3817 May 21 j 07:06	0°♎		-3812 Mar 04 j 13:15	0°♊	
	-3817 Jul 06 j 20:28	0°♏	morning rise	-3812 Mar 06 j 19:44	1°♊39'24	
evening set	-3817 Jul 14 j 23:31	5°♏24'02		-3812 Apr 15 j 16:33	0°♋	
max. Earth dist.	-3817 Aug 02 j 02:52	17°♏38'11		-3812 May 30 j 07:33	0°♌	
	-3817 Aug 20 j 01:22	0°♐		-3812 Jul 17 j 00:33	0°♍	
			asc. node	-3812 Jul 26 j 07:46	5°♍33'41	
conjunction	-3817 Sep 01 j 23:02	9°♐03'19		-3812 Sep 08 j 03:37	0°♎	
minimum elong	-3817 Sep 02 j 00:37	9°♐06'07	retrograde	-3812 Nov 27 j 17:52	26°♎13'03	
	-3817 Oct 01 j 02:09	0°♑	opposition	-3811 Jan 05 j 09:50	17°♎15'50	4°40'02
morning rise	-3817 Oct 23 j 16:20	16°♑41'35	greatest brilliancy	-3811 Jan 06 j 04:17	16°♎57'45	-1.4m
	-3817 Nov 10 j 08:41	0°♒	min. Earth dist.	-3811 Jan 09 j 10:03	15°♎41'35	0.64467 AU
desc. node	-3817 Dec 10 j 03:24	22°♒46'57	direct	-3811 Feb 15 j 14:07	7°♎14'58	
	-3817 Dec 19 j 11:46	0°♓		-3811 Apr 28 j 08:22	0°♏	
	-3816 Jan 27 j 05:25	0°♈		-3811 Jun 17 j 23:05	0°♐	
	-3816 Mar 06 j 10:57	0°☾	desc. node	-3811 Jul 31 j 20:46	0°♑15'49	
	-3816 Apr 16 j 06:40	0°♊		-3811 Jul 31 j 12:01	0°♒	
	-3816 May 30 j 07:21	0°♋		-3811 Sep 09 j 18:05	0°♓	
	-3816 Jul 21 j 01:57	0°♌		-3811 Oct 18 j 10:02	0°♔	
retrograde	-3816 Sep 18 j 20:33	17°♌38'54		-3811 Nov 25 j 17:13	0°♕	
asc. node	-3816 Oct 21 j 07:30	10°♌39'47	evening set	-3810 Jan 02 j 16:40	29°♕15'57	
min. Earth dist.	-3816 Oct 25 j 05:48	9°♌06'45		-3810 Jan 03 j 15:53	0°☾	
opposition	-3816 Oct 28 j 18:57	7°♌41'09		-3810 Feb 13 j 01:17	0°♊	
greatest brilliancy	-3816 Oct 28 j 17:22	7°♌42'44				
	-3816 Nov 21 j 12:08	30°♌	conjunction	-3810 Mar 04 j 16:53	14°♊06'26	0°-52'-47
direct	-3816 Dec 06 j 09:19	28°♌32'24	minimum elong	-3810 Mar 04 j 19:06	14°♊10'23	0°52'53
	-3816 Dec 22 j 07:13	0°♌		-3810 Mar 27 j 09:35	0°♋	
	-3815 Mar 07 j 23:40	0°♍	max. Earth dist.	-3810 Apr 09 j 13:36	9°♋01'56	2.53904 AU
	-3815 Apr 29 j 21:47	0°♎	morning rise	-3810 Apr 29 j 22:27	22°♋45'07	
	-3815 Jun 16 j 17:50	0°♏		-3810 May 10 j 20:59	0°♌	
	-3815 Jul 31 j 04:53	0°♐	asc. node	-3810 Jun 13 j 05:35	21°♌38'23	
evening set	-3815 Aug 28 j 16:20	20°♐15'33		-3810 Jun 26 j 09:29	0°♍	
	-3815 Sep 11 j 00:00	0°♑		-3810 Aug 14 j 01:08	0°♎	
max. Earth dist.	-3815 Sep 15 j 17:37	3°♑30'06		-3810 Oct 05 j 05:59	0°♏	
	-3815 Oct 20 j 19:20	0°♒		-3810 Dec 12 j 07:16	0°♐	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 10

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

retrograde	-3809 Jan 09 j 11:14	4°♏15'44			-3805 Dec 08 j 13:51	0°≈	
	-3809 Feb 04 j 13:02	30°♐♌			-3804 Jan 25 j 06:41	0°♐	
opposition	-3809 Feb 14 j 17:32	26°♌28'56	4°58'42	asc. node	-3804 Feb 02 j 22:24	5°♐27'32	
greatest brilliancy	-3809 Feb 16 j 11:39	25°♌50'04	-1.8m		-3804 Mar 12 j 22:13	0°♑	
min. Earth dist.	-3809 Feb 22 j 05:32	23°♌43'38	0.55490 AU		-3804 Apr 29 j 15:32	0°♒	
direct	-3809 Mar 26 j 13:34	17°♌05'20		evening set	-3804 May 21 j 16:30	13°♒55'19	
	-3809 May 14 j 13:36	0°♏			-3804 Jun 15 j 22:30	0°♑	
desc. node	-3809 Jun 18 j 20:48	19°♏14'12		max. Earth dist.	-3804 Jun 24 j 09:27	5°♑25'39	2.65492 AU
	-3809 Jul 05 j 18:11	0°♐					
	-3809 Aug 17 j 12:34	0°♑		conjunction	-3804 Jul 07 j 06:15	13°♑43'53	1°06'52
	-3809 Sep 26 j 09:47	0°♒		minimum elong	-3804 Jul 07 j 05:25	13°♑42'32	1°07'02
	-3809 Nov 04 j 13:35	0°♓			-3804 Aug 01 j 03:58	0°♌	
	-3809 Dec 14 j 06:28	0°♑		morning rise	-3804 Aug 21 j 16:42	13°♌37'48	
	-3808 Jan 24 j 08:57	0°≈			-3804 Sep 14 j 22:26	0°♏	
evening set	-3808 Feb 28 j 16:56	24°≈46'29			-3804 Oct 28 j 04:40	0°♐	
	-3808 Mar 07 j 07:49	0°♐			-3804 Dec 09 j 03:34	0°♑	
					-3803 Jan 19 j 05:27	0°♒	
conjunction	-3808 Apr 21 j 12:29	0°♑14'20	0°-4'-58	desc. node	-3803 Feb 07 j 22:17	14°♒28'11	
minimum elong	-3808 Apr 21 j 12:42	0°♑14'41	0°04'59		-3803 Mar 01 j 04:33	0°♓	
behind sun begin	-3808 Apr 20 j 16:30	29°♐41'33			-3803 Apr 12 j 14:41	0°♑	
behind sun end	-3808 Apr 22 j 08:53	0°♑47'48			-3803 May 31 j 08:49	0°≈	
	-3808 Apr 21 j 03:44	0°♑		retrograde	-3803 Jul 25 j 04:02	16°≈54'07	
asc. node	-3808 Apr 30 j 02:33	5°♑51'38		min. Earth dist.	-3803 Aug 23 j 12:55	10°≈58'36	0.49204 AU
max. Earth dist.	-3808 May 08 j 02:06	11°♑03'29	2.63090 AU	greatest brilliancy	-3803 Aug 29 j 17:34	8°≈43'38	-2.1m
	-3808 Jun 06 j 11:53	0°♒		opposition	-3803 Aug 31 j 10:16	8°≈06'23	-4°-46'-27
morning rise	-3808 Jun 09 j 13:30	1°♒57'37		direct	-3803 Oct 04 j 04:18	0°≈56'32	
	-3808 Jul 23 j 19:56	0°♑		asc. node	-3803 Dec 20 j 21:28	26°≈33'13	
	-3808 Sep 09 j 21:36	0°♌			-3803 Dec 27 j 13:03	0°♐	
	-3808 Oct 29 j 06:27	0°♏			-3802 Feb 19 j 01:36	0°♑	
	-3808 Dec 21 j 19:27	0°♐			-3802 Apr 10 j 04:36	0°♒	
retrograde	-3807 Mar 08 j 19:18	24°♐55'39			-3802 May 28 j 10:52	0°♑	
opposition	-3807 Apr 10 j 00:07	19°♐03'55	1°41'41	evening set	-3802 Jun 29 j 05:16	20°♑25'02	
greatest brilliancy	-3807 Apr 10 j 19:28	18°♐49'06	-2.5m		-3802 Jul 13 j 19:20	0°♌	
min. Earth dist.	-3807 Apr 17 j 12:35	16°♐46'13	0.42675 AU	max. Earth dist.	-3802 Jul 20 j 23:49	4°♌46'27	2.58747 AU
desc. node	-3807 May 05 j 20:38	12°♐39'28					
direct	-3807 May 14 j 21:22	12°♐06'04		conjunction	-3802 Aug 15 j 20:17	22°♌15'09	1°07'10
	-3807 Jul 10 j 14:57	0°♑		minimum elong	-3802 Aug 15 j 21:12	22°♌16'43	1°07'18
	-3807 Aug 27 j 19:05	0°♒			-3802 Aug 27 j 01:50	0°♏	
	-3807 Oct 09 j 13:40	0°♓		morning rise	-3802 Oct 03 j 17:11	26°♏39'07	
	-3807 Nov 20 j 14:57	0°♑			-3802 Oct 08 j 08:14	0°♐	
	-3806 Jan 02 j 11:20	0°≈			-3802 Nov 17 j 22:40	0°♑	
	-3806 Feb 15 j 17:33	0°♐		desc. node	-3802 Dec 26 j 20:26	29°♑33'29	
asc. node	-3806 Mar 18 j 00:26	19°♐58'22			-3802 Dec 27 j 10:17	0°♒	
	-3806 Apr 02 j 10:32	0°♑			-3801 Feb 04 j 12:21	0°♓	
evening set	-3806 Apr 13 j 11:17	7°♑07'42			-3801 Mar 16 j 03:00	0°♑	
	-3806 May 19 j 03:35	0°♒			-3801 Apr 26 j 13:40	0°≈	
					-3801 Jun 11 j 07:55	0°♐	
conjunction	-3806 May 31 j 17:03	8°♒00'48	0°39'39		-3801 Aug 14 j 16:03	0°♑	
minimum elong	-3806 May 31 j 15:50	7°♒58'51	0°39'44	retrograde	-3801 Sep 05 j 13:11	2°♑59'43	
max. Earth dist.	-3806 Jun 01 j 19:34	8°♒43'04	2.66997 AU		-3801 Sep 26 j 02:52	30°♐♐	
	-3806 Jul 05 j 04:00	0°♑		min. Earth dist.	-3801 Oct 10 j 04:44	25°♐04'00	0.60478 AU
morning rise	-3806 Jul 16 j 10:21	7°♑12'32		opposition	-3801 Oct 15 j 04:08	23°♐05'03	0°-58'-48
	-3806 Aug 20 j 20:19	0°♌		greatest brilliancy	-3801 Oct 14 j 22:09	23°♐11'00	-1.6m
	-3806 Oct 05 j 21:23	0°♏		asc. node	-3801 Nov 07 j 22:04	15°♐36'06	
	-3806 Nov 20 j 10:04	0°♐		direct	-3801 Nov 21 j 15:47	14°♐20'46	
	-3805 Jan 04 j 22:36	0°♑			-3800 Jan 19 j 11:13	0°♑	
	-3805 Feb 20 j 21:14	0°♒			-3800 Mar 18 j 01:15	0°♒	
desc. node	-3805 Mar 23 j 21:45	18°♒04'13			-3800 May 07 j 21:11	0°♑	
	-3805 Apr 17 j 13:23	0°♓			-3800 Jun 24 j 01:53	0°♌	
retrograde	-3805 May 26 j 21:14	9°♓07'34			-3800 Aug 07 j 09:13	0°♏	
min. Earth dist.	-3805 Jun 23 j 10:28	4°♓38'02	0.38397 AU	evening set	-3800 Aug 09 j 16:46	1°♏37'03	
greatest brilliancy	-3805 Jun 26 j 09:03	3°♓49'00	-2.8m	max. Earth dist.	-3800 Aug 24 j 22:48	12°♏23'52	2.47587 AU
opposition	-3805 Jun 27 j 11:29	3°♓30'33	-5°-59'-7		-3800 Sep 18 j 05:36	0°♐	
	-3805 Jul 11 j 16:43	30°♒♒					
direct	-3805 Jul 27 j 09:28	28°♒25'37		conjunction	-3800 Oct 01 j 06:41	9°♐39'55	0°28'48
	-3805 Aug 12 j 00:59	0°♓		minimum elong	-3800 Oct 01 j 08:17	9°♐42'53	0°28'50
	-3805 Oct 19 j 22:59	0°♑			-3800 Oct 28 j 04:20	0°♑	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 11

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

desc. node	-3800 Nov 12 j 18:59	12°♄00'20		retrograde	-3795 Dec 22 j 14:11	18°♄45'53	
morning rise	-3800 Nov 28 j 17:29	24°♄22'36		opposition	-3794 Jan 28 j 23:10	10°♄27'07	5°05'54
	-3800 Dec 05 j 22:32	0°♄		greatest brilliancy	-3794 Jan 30 j 09:08	9°♄54'47	-1.6m
	-3799 Jan 13 j 07:44	0°♄		min. Earth dist.	-3794 Feb 04 j 04:56	8°♄04'54	0.59691 AU
	-3799 Feb 21 j 04:48	0°♄		direct	-3794 Mar 10 j 15:03	0°♄40'19	
	-3799 Apr 02 j 11:54	0°♄			-3794 May 31 j 01:10	0°♄	
	-3799 May 15 j 06:20	0°♄		desc. node	-3794 Jul 05 j 13:04	22°♄25'51	
	-3799 Jul 01 j 06:04	0°♄			-3794 Jul 16 j 14:20	0°♄	
	-3799 Aug 28 j 23:16	0°♄			-3794 Aug 26 j 22:12	0°♄	
asc. node	-3799 Sep 24 j 22:59	7°♄57'33			-3794 Oct 05 j 03:19	0°♄	
retrograde	-3799 Oct 10 j 07:38	9°♄23'26			-3794 Nov 12 j 20:11	0°♄	
min. Earth dist.	-3799 Nov 18 j 00:53	0°♄04'41	0.66521 AU		-3794 Dec 22 j 03:41	0°♄	
	-3799 Nov 18 j 05:33	30°♄			-3793 Jan 31 j 21:26	0°♄	
opposition	-3799 Nov 19 j 07:54	29°♄33'28	2°01'44	evening set	-3793 Feb 08 j 07:31	5°♄19'21	
greatest brilliancy	-3799 Nov 19 j 03:33	29°♄37'50	-1.3m		-3793 Mar 15 j 12:51	0°♄	
direct	-3799 Dec 29 j 06:48	19°♄56'54					
	-3798 Feb 12 j 21:28	0°♄		conjunction	-3793 Apr 04 j 22:19	13°♄52'19	0°-24'-28
	-3798 Apr 15 j 06:19	0°♄		minimum elong	-3793 Apr 04 j 23:29	13°♄54'17	0°24'32
	-3798 Jun 04 j 00:27	0°♄		max. Earth dist.	-3793 Apr 28 j 13:40	29°♄37'04	2.60073 AU
	-3798 Jul 19 j 01:56	0°♄			-3793 Apr 29 j 03:35	0°♄	
	-3798 Aug 29 j 23:53	0°♄		asc. node	-3793 May 17 j 19:37	12°♄12'35	
desc. node	-3798 Sep 30 j 17:18	23°♄51'28		morning rise	-3793 May 26 j 06:05	17°♄40'20	
evening set	-3798 Oct 01 j 17:24	24°♄37'36			-3793 Jun 14 j 11:12	0°♄	
	-3798 Oct 08 j 17:16	0°♄			-3793 Aug 01 j 03:11	0°♄	
	-3798 Nov 16 j 04:09	0°♄			-3793 Sep 19 j 05:59	0°♄	
					-3793 Nov 10 j 13:35	0°♄	
conjunction	-3798 Dec 03 j 03:35	13°♄22'22	0°-42'-25		-3792 Jan 19 j 15:22	0°♄	
minimum elong	-3798 Dec 03 j 00:28	13°♄16'13	0°42'30	retrograde	-3792 Feb 11 j 16:37	2°♄59'01	
max. Earth dist.	-3798 Dec 09 j 21:58	18°♄42'14	2.37553 AU		-3792 Mar 04 j 16:10	30°♄	
	-3798 Dec 24 j 06:51	0°♄		opposition	-3792 Mar 16 j 17:52	26°♄17'11	3°40'44
morning rise	-3797 Jan 31 j 22:57	0°♄		greatest brilliancy	-3792 Mar 18 j 10:23	25°♄43'03	-2.2m
	-3797 Feb 09 j 09:59	6°♄26'38		min. Earth dist.	-3792 Mar 25 j 06:57	23°♄25'43	0.47694 AU
	-3797 Mar 13 j 00:18	0°♄		direct	-3792 Apr 23 j 03:23	18°♄05'49	
	-3797 Apr 24 j 03:48	0°♄		desc. node	-3792 May 22 j 13:41	23°♄30'21	
	-3797 Jun 08 j 00:43	0°♄			-3792 Jun 07 j 12:47	0°♄	
	-3797 Jul 26 j 18:42	0°♄			-3792 Jul 28 j 18:57	0°♄	
asc. node	-3797 Aug 12 j 22:16	9°♄42'41			-3792 Sep 09 j 07:10	0°♄	
	-3797 Sep 22 j 21:17	0°♄			-3792 Oct 19 j 21:52	0°♄	
retrograde	-3797 Nov 14 j 08:03	13°♄03'19			-3792 Nov 29 j 16:10	0°♄	
opposition	-3797 Dec 23 j 14:07	3°♄46'47	4°07'24		-3791 Jan 10 j 14:47	0°♄	
greatest brilliancy	-3797 Dec 23 j 23:24	3°♄37'34	-1.3m		-3791 Feb 23 j 05:30	0°♄	
min. Earth dist.	-3797 Dec 26 j 02:18	2°♄47'06	0.66308 AU	evening set	-3791 Mar 28 j 00:36	21°♄49'44	
	-3796 Jan 02 j 08:11	30°♄		asc. node	-3791 Apr 03 j 16:46	26°♄12'29	
direct	-3796 Feb 02 j 16:49	23°♄46'39			-3791 Apr 09 j 12:02	0°♄	
	-3796 Mar 08 j 01:31	0°♄					
	-3796 May 10 j 04:27	0°♄		conjunction	-3791 May 16 j 15:51	24°♄00'59	0°23'53
	-3796 Jun 26 j 23:37	0°♄		minimum elong	-3791 May 16 j 14:58	23°♄59'34	0°23'56
	-3796 Aug 08 j 17:57	0°♄		max. Earth dist.	-3791 May 23 j 10:57	28°♄22'18	2.66115 AU
desc. node	-3796 Aug 17 j 14:33	6°♄30'36			-3791 May 25 j 23:59	0°♄	
	-3796 Sep 17 j 17:13	0°♄		morning rise	-3791 Jul 02 j 07:17	23°♄47'31	
greatest brilliancy	-3796 Oct 04 j 12:39	13°♄00'21	1.2m		-3791 Jul 12 j 01:23	0°♄	
	-3796 Oct 26 j 05:38	0°♄			-3791 Aug 28 j 02:56	0°♄	
	-3796 Dec 03 j 09:48	0°♄			-3791 Oct 14 j 01:44	0°♄	
evening set	-3796 Dec 07 j 04:33	2°♄57'25			-3791 Nov 30 j 09:00	0°♄	
	-3795 Jan 11 j 04:51	0°♄			-3790 Jan 18 j 13:53	0°♄	
					-3790 Mar 18 j 18:57	0°♄	
conjunction	-3795 Feb 09 j 12:19	21°♄59'44	-1°-4'-50	desc. node	-3790 Apr 09 j 14:12	6°♄26'35	
minimum elong	-3795 Feb 09 j 13:49	22°♄02'30	1°04'59	retrograde	-3790 Apr 25 j 22:59	8°♄04'45	
	-3795 Feb 20 j 10:03	0°♄		opposition	-3790 May 26 j 08:59	3°♄02'31	-3°-23'-44
max. Earth dist.	-3795 Mar 25 j 10:29	23°♄36'25	2.49037 AU	greatest brilliancy	-3790 May 26 j 12:07	3°♄00'27	-2.9m
	-3795 Apr 03 j 14:41	0°♄		min. Earth dist.	-3790 May 27 j 15:12	2°♄42'27	0.37852 AU
morning rise	-3795 Apr 10 j 21:33	5°♄01'40			-3790 Jun 07 j 13:29	30°♄	
	-3795 May 18 j 01:01	0°♄		direct	-3790 Jun 25 j 20:42	27°♄52'34	
asc. node	-3795 Jun 29 j 21:12	27°♄31'50			-3790 Jul 14 j 01:54	0°♄	
	-3795 Jul 03 j 19:54	0°♄			-3790 Sep 17 j 01:06	0°♄	
	-3795 Aug 22 j 12:54	0°♄			-3790 Nov 03 j 08:22	0°♄	
	-3795 Oct 17 j 20:14	0°♄			-3790 Dec 18 j 20:52	0°♄	

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3789 Feb 02 j 17:30	0°♄		desc. node	-3785 Nov 30 j 13:15	19°♅07'09	
asc. node	-3789 Feb 19 j 14:05	10°♄53'45			-3785 Dec 14 j 14:31	0°♌	
	-3789 Mar 21 j 09:43	0°♄			-3784 Jan 22 j 04:44	0°♌	
evening set	-3789 May 07 j 17:58	0°♄04'23			-3784 Mar 01 j 06:16	0°♌	
	-3789 May 07 j 15:13	0°♄			-3784 Apr 10 j 19:14	0°♌	
max. Earth dist.	-3789 Jun 16 j 03:19	25°♄07'31	2.66729 AU		-3784 May 24 j 04:15	0°♄	
					-3784 Jul 12 j 08:44	0°♄	
conjunction	-3789 Jun 23 j 15:54	29°♄56'17	0°58'57	retrograde	-3784 Sep 26 j 19:13	26°♄03'15	
minimum elong	-3789 Jun 23 j 14:42	29°♄54'23	0°59'05	asc. node	-3784 Oct 11 j 12:56	24°♄33'10	
	-3789 Jun 23 j 18:13	0°♄		min. Earth dist.	-3784 Nov 03 j 01:11	17°♄13'41	0.64869 AU
morning rise	-3789 Aug 07 j 20:19	29°♄10'50		opposition	-3784 Nov 05 j 19:41	16°♄06'44	0°58'31
	-3789 Aug 09 j 02:21	0°♄		greatest brilliancy	-3784 Nov 05 j 15:41	16°♄10'45	-1.4m
	-3789 Sep 23 j 06:06	0°♄		direct	-3784 Dec 14 j 23:13	6°♄46'50	
	-3789 Nov 06 j 04:07	0°♄			-3783 Feb 28 j 09:28	0°♄	
	-3789 Dec 19 j 01:37	0°♄			-3783 Apr 24 j 08:47	0°♄	
	-3788 Jan 30 j 09:39	0°♌			-3783 Jun 11 j 19:10	0°♄	
desc. node	-3788 Feb 25 j 14:35	18°♌28'46			-3783 Jul 26 j 11:21	0°♄	
	-3788 Mar 13 j 05:42	0°♌			-3783 Sep 06 j 07:39	0°♄	
	-3788 Apr 28 j 19:59	0°♌		evening set	-3783 Sep 09 j 08:04	2°♄13'43	
retrograde	-3788 Jul 04 j 17:25	23°♌49'40		max. Earth dist.	-3783 Oct 03 j 08:03	20°♄14'21	2.40130 AU
min. Earth dist.	-3788 Aug 01 j 02:01	18°♌47'00	0.44222 AU		-3783 Oct 16 j 02:30	0°♄	
greatest brilliancy	-3788 Aug 07 j 00:24	16°♌48'56	-2.4m	desc. node	-3783 Oct 17 j 10:20	1°♄01'13	
opposition	-3788 Aug 09 j 02:12	16°♌07'10	-6°-4'-32				
direct	-3788 Sep 10 j 02:16	9°♌49'30		conjunction	-3783 Nov 06 j 13:42	16°♄37'53	0°-14'-18
	-3788 Nov 14 j 19:57	0°♌		minimum elong	-3783 Nov 06 j 12:33	16°♄35'39	0°14'21
asc. node	-3787 Jan 06 j 12:49	28°♌51'12		behind sun begin	-3783 Nov 05 j 23:44	16°♄10'41	
	-3787 Jan 08 j 12:04	0°♄		behind sun end	-3783 Nov 07 j 01:22	17°♄00'37	
	-3787 Feb 27 j 18:02	0°♄			-3783 Nov 23 j 15:35	0°♌	
	-3787 Apr 17 j 16:08	0°♄			-3783 Dec 31 j 20:05	0°♌	
	-3787 Jun 04 j 11:00	0°♄		morning rise	-3782 Jan 11 j 15:29	8°♌26'45	
evening set	-3787 Jun 14 j 01:09	6°♄07'52			-3782 Feb 08 j 13:10	0°♌	
max. Earth dist.	-3787 Jul 10 j 01:14	22°♄58'57	2.62007 AU		-3782 Mar 20 j 15:05	0°♌	
	-3787 Jul 20 j 17:08	0°♄			-3782 May 01 j 21:09	0°♄	
					-3782 Jun 16 j 05:06	0°♄	
conjunction	-3787 Jul 30 j 20:57	6°♄44'52	1°10'57		-3782 Aug 05 j 18:27	0°♄	
minimum elong	-3787 Jul 30 j 21:05	6°♄45'06	1°11'07	asc. node	-3782 Aug 29 j 13:53	12°♄10'46	
	-3787 Sep 03 j 03:20	0°♄			-3782 Oct 26 j 06:28	0°♄	
morning rise	-3787 Sep 15 j 19:29	8°♄47'59		retrograde	-3782 Oct 31 j 12:44	0°♄10'20	
	-3787 Oct 15 j 17:22	0°♄			-3782 Nov 05 j 16:13	30°♄	
	-3787 Nov 25 j 17:59	0°♄		opposition	-3782 Dec 10 j 04:54	20°♄38'01	3°25'24
	-3786 Jan 04 j 16:42	0°♌		greatest brilliancy	-3782 Dec 10 j 06:50	20°♄36'06	-1.3m
desc. node	-3786 Jan 12 j 15:05	6°♌00'39		min. Earth dist.	-3782 Dec 11 j 04:53	20°♄14'02	0.67149 AU
	-3786 Feb 13 j 06:24	0°♌		direct	-3781 Jan 20 j 00:45	10°♄43'48	
	-3786 Mar 25 j 11:33	0°♌			-3781 Mar 27 j 12:57	0°♄	
	-3786 May 07 j 02:06	0°♌			-3781 May 20 j 23:05	0°♄	
	-3786 Jun 25 j 23:23	0°♄			-3781 Jul 06 j 07:02	0°♄	
retrograde	-3786 Aug 21 j 07:25	16°♄58'13			-3781 Aug 17 j 14:28	0°♄	
min. Earth dist.	-3786 Sep 23 j 00:50	9°♄44'33	0.56564 AU	desc. node	-3781 Sep 04 j 07:51	13°♄10'33	
opposition	-3786 Sep 29 j 08:18	7°♄16'35	-2°-23'-32		-3781 Sep 26 j 10:04	0°♄	
greatest brilliancy	-3786 Sep 28 j 14:29	7°♄34'00	-1.8m		-3781 Nov 03 j 20:44	0°♌	
	-3786 Oct 23 j 14:53	30°♄		evening set	-3781 Nov 10 j 22:01	5°♄33'22	
direct	-3786 Nov 04 j 12:09	29°♄02'57			-3781 Dec 11 j 23:13	0°♌	
	-3786 Nov 17 j 01:14	0°♄					
asc. node	-3786 Nov 24 j 12:24	1°♄22'14		conjunction	-3780 Jan 15 j 16:30	26°♌57'15	-1°-6'-53
	-3785 Feb 02 j 05:10	0°♄		minimum elong	-3780 Jan 15 j 15:38	26°♌55'35	1°07'04
	-3785 Mar 27 j 21:24	0°♄			-3780 Jan 19 j 16:03	0°♌	
	-3785 May 16 j 10:09	0°♄			-3780 Feb 28 j 18:30	0°♌	
	-3785 Jul 02 j 04:44	0°♄		max. Earth dist.	-3780 Mar 04 j 18:11	3°♌38'08	2.43836 AU
evening set	-3785 Jul 24 j 08:32	14°♄48'52		morning rise	-3780 Mar 20 j 08:47	14°♌52'15	
max. Earth dist.	-3785 Aug 09 j 23:31	26°♄11'53	2.52392 AU		-3780 Apr 10 j 21:06	0°♄	
	-3785 Aug 15 j 10:55	0°♄			-3780 May 25 j 08:46	0°♄	
					-3780 Jul 11 j 14:48	0°♄	
conjunction	-3785 Sep 12 j 08:46	19°♄46'41	0°48'59	asc. node	-3780 Jul 16 j 13:10	3°♄00'52	
minimum elong	-3785 Sep 12 j 10:34	19°♄49'56	0°49'04		-3780 Sep 01 j 01:22	0°♄	
	-3785 Sep 26 j 10:32	0°♄			-3780 Nov 07 j 11:37	0°♄	
morning rise	-3785 Nov 05 j 03:30	29°♄38'50		retrograde	-3780 Dec 06 j 10:53	4°♄29'44	
	-3785 Nov 05 j 14:39	0°♄			-3779 Jan 02 j 00:32	30°♄	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 13

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

opposition	-3779 Jan 13 j 17:09	25°II44'54	4°53'31		-3775 Nov 14 j 10:14	0°☾	
greatest brilliancy	-3779 Jan 14 j 17:04	25°II21'39	-1.4m		-3775 Dec 27 j 23:12	0°≈	
min. Earth dist.	-3779 Jan 18 j 12:33	23°II52'53	0.63024 AU		-3774 Feb 10 j 16:11	0°✠	
direct	-3779 Feb 23 j 19:05	15°II46'53		asc. node	-3774 Mar 08 j 05:37	16°✠46'01	
	-3779 Apr 18 j 13:59	0°☾			-3774 Mar 28 j 15:50	0°☿	
	-3779 Jun 11 j 15:05	0°♊		evening set	-3774 Apr 22 j 12:10	15°☿56'59	
desc. node	-3779 Jul 22 j 06:18	27°♊21'15			-3774 May 14 j 12:33	0°♋	
	-3779 Jul 25 j 23:36	0°♌		max. Earth dist.	-3774 Jun 07 j 03:31	15°♋03'07	2.67141 AU
	-3779 Sep 04 j 13:36	0°♍					
	-3779 Oct 13 j 09:31	0°♎		conjunction	-3774 Jun 09 j 03:28	16°♋19'32	0°47'37
	-3779 Nov 20 j 19:19	0°♏		minimum elong	-3774 Jun 09 j 02:11	16°♋17'29	0°47'42
	-3779 Dec 29 j 20:06	0°☾			-3774 Jun 30 j 13:22	0°♐	
evening set	-3778 Jan 16 j 14:57	13°☾20'49		morning rise	-3774 Jul 24 j 12:48	15°♐23'46	
	-3778 Feb 08 j 07:08	0°≈			-3774 Aug 16 j 02:18	0°☾	
					-3774 Sep 30 j 18:56	0°♊	
conjunction	-3778 Mar 16 j 15:05	25°≈47'50	0°-43'-14		-3774 Nov 14 j 15:30	0°♌	
minimum elong	-3778 Mar 16 j 17:07	25°≈51'21	0°43'19		-3774 Dec 29 j 00:01	0°♍	
	-3778 Mar 22 j 16:41	0°✠			-3773 Feb 11 j 14:57	0°♎	
max. Earth dist.	-3778 Apr 17 j 02:41	17°✠18'49	2.56294 AU	desc. node	-3773 Mar 14 j 08:23	19°♎51'17	
	-3778 May 06 j 03:57	0°☿			-3773 Mar 31 j 02:17	0°♏	
morning rise	-3778 May 09 j 21:45	2°☿27'52		retrograde	-3773 Jun 11 j 11:17	26°♏29'30	
asc. node	-3778 Jun 03 j 11:02	18°☿26'10		min. Earth dist.	-3773 Jul 08 j 04:10	22°♏01'33	0.39928 AU
	-3778 Jun 21 j 13:20	0°♋		greatest brilliancy	-3773 Jul 12 j 15:52	20°♏42'08	-2.7m
	-3778 Aug 08 j 17:52	0°♐		opposition	-3773 Jul 14 j 09:34	20°♏11'12	-6°-30'-57
	-3778 Sep 28 j 11:43	0°☾		direct	-3773 Aug 13 j 16:17	14°♏46'43	
	-3778 Nov 25 j 22:47	0°♊			-3773 Oct 07 j 04:53	0°☾	
retrograde	-3777 Jan 20 j 16:03	14°♊19'39			-3773 Dec 01 j 02:39	0°≈	
opposition	-3777 Feb 25 j 05:31	6°♊53'49	4°41'35		-3772 Jan 19 j 09:59	0°✠	
greatest brilliancy	-3777 Feb 27 j 01:51	6°♊13'57	-1.9m	asc. node	-3772 Jan 24 j 03:14	2°✠54'53	
min. Earth dist.	-3777 Mar 05 j 07:19	4°♊00'40	0.52816 AU		-3772 Mar 07 j 18:57	0°☿	
	-3777 Mar 18 j 14:45	30°♌☾			-3772 Apr 24 j 21:08	0°♋	
direct	-3777 Apr 05 j 09:00	27°☾50'34		evening set	-3772 May 30 j 04:58	22°♋16'33	
	-3777 Apr 23 j 19:44	0°♊			-3772 Jun 11 j 07:57	0°♐	
desc. node	-3777 Jun 09 j 05:25	19°♊09'55		max. Earth dist.	-3772 Jun 29 j 23:39	11°♐59'28	2.64473 AU
	-3777 Jun 27 j 15:30	0°♌					
	-3777 Aug 11 j 00:47	0°♍		conjunction	-3772 Jul 15 j 17:46	22°♐13'54	1°09'40
	-3777 Sep 20 j 13:38	0°♎		minimum elong	-3772 Jul 15 j 17:15	22°♐13'02	1°09'49
	-3777 Oct 30 j 02:44	0°♏			-3772 Jul 27 j 13:39	0°☾	
	-3777 Dec 09 j 02:39	0°☾		morning rise	-3772 Aug 30 j 12:40	22°☾42'56	
	-3776 Jan 19 j 10:31	0°≈			-3772 Sep 10 j 05:11	0°♊	
	-3776 Mar 02 j 13:35	0°✠			-3772 Oct 23 j 05:13	0°♌	
evening set	-3776 Mar 10 j 09:55	5°✠19'25			-3772 Dec 03 j 19:25	0°♍	
	-3776 Apr 16 j 12:00	0°☿			-3771 Jan 13 j 10:02	0°♎	
asc. node	-3776 Apr 20 j 08:58	2°☿32'16		desc. node	-3771 Jan 29 j 07:42	11°♎50'28	
					-3771 Feb 22 j 18:10	0°♏	
conjunction	-3776 Apr 30 j 22:27	9°☿25'23	0°06'05		-3771 Apr 05 j 02:04	0°☾	
minimum elong	-3776 Apr 30 j 22:12	9°☿24'58	0°06'06		-3771 May 20 j 07:27	0°≈	
behind sun begin	-3776 Apr 30 j 02:59	8°☿53'46		retrograde	-3771 Aug 04 j 13:22	28°≈48'58	
behind sun end	-3776 May 01 j 17:25	9°☿56'10		min. Earth dist.	-3771 Sep 04 j 04:06	22°≈23'54	0.51937 AU
max. Earth dist.	-3776 May 13 j 20:28	17°☿47'21	2.64397 AU	greatest brilliancy	-3771 Sep 10 j 05:49	20°≈06'56	-2.0m
	-3776 Jun 01 j 20:34	0°♋		opposition	-3771 Sep 11 j 14:25	19°≈36'10	-3°-54'-44
morning rise	-3776 Jun 17 j 23:23	10°♋17'18		direct	-3771 Oct 16 j 05:27	12°≈01'15	
	-3776 Jul 19 j 01:14	0°♐		asc. node	-3771 Dec 11 j 03:27	26°≈54'29	
	-3776 Sep 04 j 16:33	0°☾			-3771 Dec 17 j 22:48	0°✠	
	-3776 Oct 22 j 23:39	0°♊			-3770 Feb 12 j 21:36	0°☿	
	-3776 Dec 12 j 09:12	0°♌			-3770 Apr 05 j 00:36	0°♋	
	-3775 Feb 10 j 07:45	0°♍			-3770 May 23 j 16:34	0°♐	
retrograde	-3775 Mar 25 j 06:54	9°♍32'41		evening set	-3770 Jul 08 j 03:30	29°♐18'24	
opposition	-3775 Apr 25 j 14:10	4°♍06'47	0°02'58		-3770 Jul 09 j 04:42	0°☾	
greatest brilliancy	-3775 Jan 22 j 16:40	21°♌52'46	-3.7m	max. Earth dist.	-3770 Jul 27 j 18:29	12°☾24'00	2.56672 AU
desc. node	-3775 Apr 26 j 06:59	3°♍54'36			-3770 Aug 22 j 11:33	0°♊	
min. Earth dist.	-3775 May 01 j 12:23	2°♍24'08	0.40312 AU				
	-3775 May 10 j 20:54	30°♌♌		conjunction	-3770 Aug 25 j 10:14	2°♊02'59	1°02'21
direct	-3775 May 28 j 18:58	27°♌53'57		minimum elong	-3770 Aug 25 j 11:34	2°♊05'18	1°02'29
	-3775 Jun 15 j 12:03	0°♍			-3770 Oct 03 j 15:43	0°♌	
	-3775 Aug 17 j 23:00	0°♎		morning rise	-3770 Oct 14 j 17:41	8°♌06'29	
	-3775 Oct 02 j 05:08	0°♏			-3770 Nov 13 j 02:27	0°♍	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 14

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

desc. node	-3770 Dec 17 j 06:34	26°♄03'31		opposition	-3765 Dec 31 j 10:51	11°♄52'46	4°27'23
	-3770 Dec 22 j 09:27	0°♄		greatest brilliancy	-3764 Jan 01 j 01:00	11°♄38'49	-1.3m
	-3769 Jan 30 j 06:23	0°♄		min. Earth dist.	-3764 Jan 03 j 18:37	10°♄34'11	0.65419 AU
	-3769 Mar 10 j 14:57	0°♄		direct	-3764 Feb 10 j 15:22	1°♄51'35	
	-3769 Apr 20 j 14:45	0°♄			-3764 May 03 j 00:41	0°♄	
	-3769 Jun 04 j 03:26	0°♄			-3764 Jun 21 j 08:10	0°♄	
	-3769 Jul 28 j 14:56	0°♄			-3764 Aug 03 j 13:33	0°♄	
retrograde	-3769 Sep 13 j 20:14	11°♄57'39		desc. node	-3764 Aug 07 j 23:44	3°♄13'09	
min. Earth dist.	-3769 Oct 19 j 11:27	3°♄41'28	0.62292 AU		-3764 Sep 12 j 17:17	0°♄	
opposition	-3769 Oct 23 j 16:33	2°♄00'13	0°-13'-17		-3764 Oct 21 j 07:45	0°♄	
greatest brilliancy	-3769 Oct 23 j 15:22	2°♄01'24	-1.5m		-3764 Nov 28 j 13:08	0°♄	
	-3769 Oct 28 j 18:47	30°♄		evening set	-3764 Dec 22 j 09:54	18°♄31'49	
asc. node	-3769 Oct 29 j 04:24	29°♄50'49			-3763 Jan 06 j 09:27	0°♄	
direct	-3769 Nov 30 j 19:53	23°♄01'46			-3763 Feb 15 j 15:50	0°♄	
	-3768 Jan 06 j 15:58	0°♄					
	-3768 Mar 11 j 16:09	0°♄		conjunction	-3763 Feb 23 j 00:30	5°♄20'24	0°-58'-48
	-3768 May 02 j 15:54	0°♄		minimum elong	-3763 Feb 23 j 02:37	5°♄24'14	0°58'57
	-3768 Jun 19 j 06:18	0°♄			-3763 Mar 29 j 21:10	0°♄	
	-3768 Aug 02 j 17:11	0°♄		max. Earth dist.	-3763 Apr 03 j 15:28	3°♄17'23	2.51813 AU
evening set	-3768 Aug 20 j 06:25	12°♄22'34		morning rise	-3763 Apr 22 j 00:29	15°♄49'12	
max. Earth dist.	-3768 Sep 05 j 04:54	23°♄51'54	2.44869 AU		-3763 May 13 j 06:42	0°♄	
	-3768 Sep 13 j 14:00	0°♄		asc. node	-3763 Jun 20 j 03:18	24°♄29'41	
					-3763 Jun 28 j 20:24	0°♄	
conjunction	-3768 Oct 13 j 14:37	22°♄27'47	0°14'24		-3763 Aug 16 j 20:12	0°♄	
minimum elong	-3768 Oct 13 j 15:34	22°♄29'36	0°14'25		-3763 Oct 09 j 08:19	0°♄	
behind sun begin	-3768 Oct 13 j 03:57	22°♄07'34		retrograde	-3762 Jan 01 j 11:40	27°♄51'13	
behind sun end	-3768 Oct 14 j 03:10	22°♄51'38		opposition	-3762 Feb 07 j 07:11	19°♄49'07	5°04'08
	-3768 Oct 23 j 11:45	0°♄		greatest brilliancy	-3762 Feb 08 j 21:56	19°♄12'48	-1.7m
desc. node	-3768 Nov 03 j 04:33	8°♄13'50		min. Earth dist.	-3762 Feb 14 j 06:33	17°♄12'57	0.57483 AU
	-3768 Dec 01 j 04:09	0°♄		direct	-3762 Mar 19 j 13:54	10°♄13'28	
morning rise	-3768 Dec 13 j 21:46	9°♄58'32			-3762 May 21 j 22:52	0°♄	
	-3767 Jan 08 j 11:13	0°♄		desc. node	-3762 Jun 25 j 23:54	20°♄40'15	
	-3767 Feb 16 j 06:03	0°♄			-3762 Jul 10 j 02:51	0°♄	
	-3767 Mar 28 j 09:54	0°♄			-3762 Aug 21 j 04:51	0°♄	
	-3767 May 09 j 21:24	0°♄			-3762 Sep 29 j 18:24	0°♄	
	-3767 Jun 25 j 00:55	0°♄			-3762 Nov 07 j 16:23	0°♄	
	-3767 Aug 18 j 04:24	0°♄			-3762 Dec 17 j 03:56	0°♄	
asc. node	-3767 Sep 15 j 04:37	11°♄24'33			-3761 Jan 27 j 01:04	0°♄	
retrograde	-3767 Oct 18 j 01:01	17°♄18'23		evening set	-3761 Feb 20 j 04:42	17°♄07'01	
opposition	-3767 Nov 26 j 23:38	7°♄33'38	2°34'55		-3761 Mar 10 j 19:08	0°♄	
min. Earth dist.	-3767 Nov 26 j 11:56	7°♄45'23	0.67012 AU				
greatest brilliancy	-3767 Nov 26 j 20:39	7°♄36'37	-1.3m	conjunction	-3761 Apr 15 j 04:21	23°♄51'16	0°-13'-8
	-3767 Dec 19 j 00:46	30°♄		minimum elong	-3761 Apr 15 j 04:58	23°♄52'16	0°13'10
direct	-3766 Jan 06 j 07:31	27°♄49'39		behind sun begin	-3761 Apr 14 j 16:58	23°♄32'23	
	-3766 Jan 25 j 23:55	0°♄		behind sun end	-3761 Apr 15 j 16:57	24°♄12'09	
	-3766 Apr 08 j 15:36	0°♄			-3761 Apr 24 j 11:30	0°♄	
	-3766 May 29 j 16:05	0°♄		max. Earth dist.	-3761 May 04 j 20:42	6°♄48'39	2.61845 AU
	-3766 Jul 14 j 03:22	0°♄		asc. node	-3761 May 08 j 00:11	8°♄51'46	
	-3766 Aug 25 j 04:39	0°♄		morning rise	-3761 Jun 04 j 03:34	26°♄24'12	
desc. node	-3766 Sep 21 j 01:21	20°♄07'16			-3761 Jun 09 j 18:26	0°♄	
	-3766 Oct 03 j 23:03	0°♄			-3761 Jul 27 j 04:57	0°♄	
evening set	-3766 Oct 15 j 15:03	9°♄01'45			-3761 Sep 13 j 16:02	0°♄	
	-3766 Nov 11 j 09:56	0°♄			-3761 Nov 03 j 01:46	0°♄	
					-3761 Dec 30 j 09:27	0°♄	
conjunction	-3766 Dec 18 j 21:54	29°♄31'42	0°-55'-4	retrograde	-3760 Feb 25 j 21:52	15°♄21'10	
minimum elong	-3766 Dec 18 j 18:46	29°♄25'34	0°55'10	opposition	-3760 Mar 29 j 22:21	9°♄06'50	2°41'02
	-3766 Dec 19 j 12:19	0°♄		greatest brilliancy	-3760 Mar 31 j 05:21	8°♄41'59	-2.4m
	-3765 Jan 27 j 04:13	0°♄		min. Earth dist.	-3760 Apr 07 j 03:35	6°♄29'27	0.44851 AU
max. Earth dist.	-3765 Jan 28 j 12:00	1°♄00'44	2.38987 AU	direct	-3760 May 05 j 01:21	1°♄33'42	
morning rise	-3765 Feb 24 j 16:51	21°♄30'40		desc. node	-3760 May 12 j 23:43	1°♄59'31	
	-3765 Mar 08 j 05:05	0°♄			-3760 Jul 19 j 04:36	0°♄	
	-3765 Apr 19 j 06:51	0°♄			-3760 Sep 02 j 02:01	0°♄	
	-3765 Jun 02 j 22:21	0°♄			-3760 Oct 13 j 16:49	0°♄	
	-3765 Jul 20 j 22:35	0°♄			-3760 Nov 24 j 01:39	0°♄	
asc. node	-3765 Aug 03 j 04:41	7°♄47'12			-3759 Jan 05 j 10:18	0°♄	
	-3765 Sep 13 j 12:40	0°♄			-3759 Feb 18 j 07:53	0°♄	
retrograde	-3765 Nov 22 j 11:55	20°♄59'15		asc. node	-3759 Mar 24 j 21:56	22°♄54'14	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 15

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3759 Apr 04 j 18:58	0°♊				-3754 Feb 07 j 17:17	0°♊	
evening set	-3759 Apr 06 j 13:33	1°♊09'13				-3754 Mar 19 j 12:57	0°♊	
	-3759 May 21 j 09:04	0°♋				-3754 Apr 30 j 08:01	0°♋	
						-3754 Jun 16 j 05:42	0°♋	
conjunction	-3759 May 25 j 08:53	2°♋33'05	0°33'21	retrograde		-3754 Aug 30 j 03:50	26°♋45'26	
minimum elong	-3759 May 25 j 07:47	2°♋31'19	0°33'24	min. Earth dist.		-3754 Oct 02 j 23:27	19°♋08'12	0.58816 AU
max. Earth dist.	-3759 May 28 j 23:11	4°♋50'52	2.66710 AU	opposition		-3754 Oct 08 j 14:06	16°♋55'07	-1°-33'-38
	-3759 Jul 07 j 09:35	0°♌		greatest brilliancy		-3754 Oct 08 j 03:32	17°♋05'33	-1.7m
morning rise	-3759 Jul 10 j 10:31	1°♌56'20		direct		-3754 Nov 14 j 12:27	8°♋23'48	
	-3759 Aug 23 j 05:57	0°♍		asc. node		-3754 Nov 14 j 19:02	8°♋23'50	
	-3759 Oct 08 j 16:05	0°♎				-3753 Jan 25 j 00:25	0°♊	
	-3759 Nov 23 j 21:17	0°♏				-3753 Mar 22 j 04:05	0°♋	
	-3758 Jan 09 j 16:45	0°♐				-3753 May 11 j 10:30	0°♌	
	-3758 Feb 28 j 15:43	0°♑				-3753 Jun 27 j 11:50	0°♍	
desc. node	-3758 Mar 31 j 00:16	15°♑12'53		evening set		-3753 Aug 03 j 01:53	24°♍37'49	
retrograde	-3758 May 13 j 19:17	25°♑55'10				-3753 Aug 10 j 19:53	0°♎	
min. Earth dist.	-3758 Jun 11 j 19:01	21°♑10'30	0.37757 AU	max. Earth dist.		-3753 Aug 18 j 13:46	5°♎25'16	2.49776 AU
opposition	-3758 Jun 13 j 13:49	20°♑41'46	-5°-5'-38			-3753 Sep 21 j 18:40	0°♏	
greatest brilliancy	-3758 Jun 13 j 02:13	20°♑49'34	-2.9m					
direct	-3758 Jul 13 j 12:18	15°♑42'27		conjunction		-3753 Sep 23 j 09:44	1°♏11'42	0°38'15
	-3758 Sep 02 j 20:53	0°♐		minimum elong		-3753 Sep 23 j 11:33	1°♏15'01	0°38'18
	-3758 Oct 26 j 03:20	0°♑				-3753 Oct 31 j 20:27	0°♐	
	-3758 Dec 12 j 13:04	0°♒		morning rise		-3753 Nov 18 j 15:45	13°♐39'35	
	-3757 Jan 28 j 07:08	0°♓		desc. node		-3753 Nov 20 j 21:54	15°♐24'07	
asc. node	-3757 Feb 09 j 19:45	7°♓59'58				-3753 Dec 09 j 17:28	0°♑	
	-3757 Mar 16 j 10:55	0°♊				-3752 Jan 17 j 04:37	0°♐	
	-3757 May 02 j 22:29	0°♋				-3752 Feb 25 j 02:56	0°♑	
evening set	-3757 May 16 j 08:34	8°♋29'29				-3752 Apr 05 j 11:15	0°♒	
	-3757 Jun 19 j 03:42	0°♌				-3752 May 18 j 09:10	0°♓	
max. Earth dist.	-3757 Jun 21 j 14:18	1°♌33'50	2.66148 AU			-3752 Jul 05 j 00:08	0°♊	
						-3752 Sep 07 j 13:33	0°♋	
conjunction	-3757 Jul 02 j 00:44	8°♌16'03	1°04'00	asc. node		-3752 Oct 01 j 19:48	4°♋09'47	
minimum elong	-3757 Jul 01 j 23:43	8°♌14'25	1°04'08	retrograde		-3752 Oct 04 j 14:09	4°♋12'48	
	-3757 Aug 04 j 10:54	0°♍				-3752 Oct 29 j 14:40	30°♋♊	
morning rise	-3757 Aug 16 j 06:54	7°♍48'14		min. Earth dist.		-3752 Nov 11 j 16:24	25°♊06'49	0.65908 AU
	-3757 Sep 18 j 10:06	0°♎		opposition		-3752 Nov 13 j 15:36	24°♊19'17	1°36'20
	-3757 Oct 31 j 23:40	0°♏		greatest brilliancy		-3752 Nov 13 j 10:49	24°♊24'07	-1.3m
	-3757 Dec 13 j 08:23	0°♐		direct		-3752 Dec 23 j 06:56	14°♊49'42	
	-3756 Jan 23 j 22:16	0°♑				-3751 Feb 19 j 08:50	0°♋	
desc. node	-3756 Feb 16 j 01:10	16°♑43'43				-3751 Apr 18 j 12:43	0°♌	
	-3756 Mar 05 j 13:07	0°♐				-3751 Jun 06 j 17:53	0°♍	
	-3756 Apr 18 j 04:36	0°♑				-3751 Jul 21 j 16:44	0°♎	
	-3756 Jun 11 j 13:41	0°♒				-3751 Sep 01 j 15:07	0°♏	
retrograde	-3756 Jul 16 j 17:13	7°♒48'04		evening set		-3751 Sep 21 j 16:00	14°♏56'46	
min. Earth dist.	-3756 Aug 14 j 03:34	2°♒16'22	0.46938 AU	desc. node		-3751 Oct 07 j 20:15	27°♏15'31	
greatest brilliancy	-3756 Aug 20 j 07:13	0°♒06'50	-2.3m			-3751 Oct 11 j 09:55	0°♐	
	-3756 Aug 20 j 14:55	30°♒♋		max. Earth dist.		-3751 Oct 30 j 13:28	14°♐50'16	2.38135 AU
opposition	-3756 Aug 22 j 05:10	29°♒26'07	-5°-23'-29			-3751 Nov 18 j 22:04	0°♑	
direct	-3756 Sep 24 j 04:28	22°♒38'45						
	-3756 Oct 30 j 18:12	0°♒		conjunction		-3751 Nov 21 j 06:49	1°♑51'33	0°-30'-48
asc. node	-3756 Dec 27 j 18:36	27°♒32'37		minimum elong		-3751 Nov 21 j 04:22	1°♑46'43	0°30'52
	-3755 Jan 01 j 05:36	0°♓				-3751 Dec 27 j 01:13	0°♐	
	-3755 Feb 22 j 03:06	0°♊		morning rise		-3750 Jan 28 j 01:40	24°♐54'26	
	-3755 Apr 12 j 16:47	0°♋				-3750 Feb 03 j 16:57	0°♑	
	-3755 May 30 j 18:17	0°♌				-3750 Mar 15 j 17:21	0°♒	
evening set	-3755 Jun 22 j 16:58	14°♌42'06				-3750 Apr 26 j 20:08	0°♓	
max. Earth dist.	-3755 Jul 16 j 05:44	0°♍05'18	2.60292 AU			-3750 Jun 10 j 19:23	0°♊	
	-3755 Jul 16 j 02:32	0°♎				-3750 Jul 30 j 02:12	0°♋	
				asc. node		-3750 Aug 19 j 19:01	11°♋20'54	
conjunction	-3755 Aug 08 j 21:44	15°♎55'09	1°09'25			-3750 Sep 29 j 23:02	0°♌	
minimum elong	-3755 Aug 08 j 22:18	15°♎56'07	1°09'35	retrograde		-3750 Nov 08 j 09:48	7°♌59'51	
	-3755 Aug 29 j 11:38	0°♎				-3750 Dec 14 j 07:56	30°♌♋	
morning rise	-3755 Sep 25 j 19:19	19°♎09'48		opposition		-3750 Dec 17 j 21:08	28°♋35'44	3°50'49
	-3755 Oct 10 j 22:15	0°♏		greatest brilliancy		-3750 Dec 18 j 02:52	28°♋30'01	-1.3m
	-3755 Nov 20 j 17:47	0°♐		min. Earth dist.		-3750 Dec 19 j 16:54	27°♋52'11	0.66816 AU
	-3755 Dec 30 j 10:34	0°♑		direct		-3749 Jan 27 j 21:44	18°♋37'47	
desc. node	-3754 Jan 02 j 23:48	2°♑42'31				-3749 Mar 17 j 08:46	0°♌	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 16

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3749 May 14 j 20:09	0°☿		conjunction	-3744 May 10 j 01:28	18°♊19'33	0°16'38
	-3749 Jul 01 j 00:36	0°♈		minimum elong	-3744 May 10 j 00:49	18°♊18'30	0°16'40
	-3749 Aug 12 j 15:17	0°♉		max. Earth dist.	-3744 May 19 j 11:13	24°♊22'44	2.65451 AU
desc. node	-3749 Aug 25 j 17:39	9°♉40'05			-3744 May 28 j 05:38	0°♊	
	-3749 Sep 21 j 13:46	0°♊		morning rise	-3744 Jun 26 j 06:24	18°♊31'15	
	-3749 Oct 30 j 01:46	0°♋			-3744 Jul 14 j 07:55	0°♋	
evening set	-3749 Nov 26 j 06:36	21°♋25'06			-3744 Aug 30 j 15:01	0°☿	
	-3749 Dec 07 j 04:50	0°♌			-3744 Oct 17 j 02:17	0°♈	
greatest brilliancy	-3749 Dec 15 j 22:26	6°♌49'54	1.2m		-3744 Dec 04 j 12:06	0°♉	
	-3748 Jan 14 j 22:04	0°♍			-3743 Jan 25 j 14:35	0°♊	
				retrograde	-3743 Apr 11 j 20:02	25°♊32'25	
conjunction	-3748 Jan 30 j 14:08	11°♍52'17	-1°-7'-12	desc. node	-3743 Apr 16 j 16:41	25°♊23'37	
minimum elong	-3748 Jan 30 j 14:48	11°♍53'32	1°07'21	opposition	-3743 May 12 j 11:58	20°♊25'04	-1°-52'-47
	-3748 Feb 24 j 00:50	0°♋		greatest brilliancy	-3743 May 12 j 19:22	20°♊20'00	-2.8m
max. Earth dist.	-3748 Mar 17 j 15:36	16°♋18'48	2.46719 AU	min. Earth dist.	-3743 May 16 j 02:33	19°♊26'00	0.38626 AU
morning rise	-3748 Apr 01 j 22:45	27°♋05'37		direct	-3743 Jun 13 j 00:25	14°♊52'23	
	-3748 Apr 06 j 02:55	0°♌			-3743 Aug 04 j 01:07	0°♋	
	-3748 May 20 j 12:11	0°♍			-3743 Sep 23 j 18:25	0°♌	
asc. node	-3748 Jul 06 j 18:07	0°♍13'06			-3743 Nov 07 j 18:59	0°♍	
	-3748 Jul 06 j 09:40	0°♎			-3743 Dec 22 j 06:31	0°♋	
	-3748 Aug 25 j 15:57	0°♏			-3742 Feb 05 j 12:36	0°♌	
	-3748 Oct 23 j 18:59	0°☿		asc. node	-3742 Feb 26 j 11:08	13°♌38'28	
retrograde	-3748 Dec 15 j 11:47	12°☿58'51			-3742 Mar 23 j 20:16	0°♍	
opposition	-3747 Jan 22 j 07:15	4°☿27'39	5°02'15	evening set	-3742 May 01 j 07:37	24°♍33'11	
greatest brilliancy	-3747 Jan 23 j 12:45	3°☿59'18	-1.5m		-3742 May 09 j 21:14	0°♎	
min. Earth dist.	-3747 Jan 27 j 22:03	2°☿18'22	0.61302 AU	max. Earth dist.	-3742 Jun 12 j 11:25	21°♎22'43	2.67015 AU
	-3747 Feb 03 j 05:34	30°♏					
direct	-3747 Mar 04 j 05:01	24°♏34'44		conjunction	-3742 Jun 17 j 11:56	24°♎35'02	0°54'35
	-3747 Apr 04 j 06:10	0°☿		minimum elong	-3742 Jun 17 j 10:41	24°♎33'02	0°54'41
	-3747 Jun 04 j 16:38	0°♈			-3742 Jun 25 j 23:10	0°♏	
desc. node	-3747 Jul 12 j 15:52	24°♈43'54		morning rise	-3742 Aug 01 j 17:05	23°♏41'15	
	-3747 Jul 20 j 05:15	0°♉			-3742 Aug 11 j 09:45	0°☿	
	-3747 Aug 30 j 05:19	0°♊			-3742 Sep 25 j 19:16	0°♈	
	-3747 Oct 08 j 06:25	0°♋			-3742 Nov 09 j 03:00	0°♉	
	-3747 Nov 15 j 19:35	0°♌			-3742 Dec 22 j 14:24	0°♊	
	-3747 Dec 24 j 23:10	0°♍			-3741 Feb 03 j 18:27	0°♋	
evening set	-3746 Jan 29 j 19:02	26°♍33'46		desc. node	-3741 Mar 04 j 16:58	19°♋49'04	
	-3746 Feb 03 j 12:46	0°♋			-3741 Mar 20 j 00:17	0°♌	
	-3746 Mar 18 j 00:04	0°♍			-3741 May 10 j 03:04	0°♎	
				retrograde	-3741 Jun 25 j 18:45	12°♎53'17	
conjunction	-3746 Mar 27 j 20:58	6°♍46'15	0°-32'-37	min. Earth dist.	-3741 Jul 22 j 13:14	8°♎09'55	0.42150 AU
minimum elong	-3746 Mar 27 j 22:33	6°♍48'57	0°32'41	greatest brilliancy	-3741 Jul 28 j 00:41	6°♎26'25	-2.5m
max. Earth dist.	-3746 Apr 24 j 00:23	25°♍02'41	2.58472 AU	opposition	-3741 Jul 30 j 01:37	5°♎47'28	-6°-26'-1
	-3746 May 01 j 11:57	0°♎			-3741 Aug 26 j 13:22	30°♏	
morning rise	-3746 May 19 j 10:17	11°♎44'50		direct	-3741 Aug 30 j 06:31	29°♎54'32	
asc. node	-3746 May 24 j 16:55	15°♎10'15			-3741 Sep 03 j 00:15	0°♎	
	-3746 Jun 16 j 19:00	0°♏			-3741 Nov 22 j 09:34	0°♋	
	-3746 Aug 03 j 14:59	0°♏			-3740 Jan 13 j 04:46	0°♌	
	-3746 Sep 22 j 07:39	0°☿		asc. node	-3740 Jan 14 j 09:49	0°♌43'36	
	-3746 Nov 15 j 12:57	0°♈			-3740 Mar 02 j 12:41	0°♍	
retrograde	-3745 Feb 01 j 16:49	25°♈01'12			-3740 Apr 20 j 01:26	0°♎	
opposition	-3745 Mar 08 j 11:38	17°♈58'40	4°12'06		-3740 Jun 06 j 16:58	0°♏	
greatest brilliancy	-3745 Mar 10 j 07:26	17°♈20'36	-2.1m	evening set	-3740 Jun 07 j 16:36	0°♏37'42	
min. Earth dist.	-3745 Mar 16 j 23:03	15°♈02'58	0.50026 AU	max. Earth dist.	-3740 Jul 05 j 17:19	18°♏41'07	2.63215 AU
direct	-3745 Apr 15 j 18:51	9°♈21'12			-3740 Jul 22 j 23:45	0°☿	
desc. node	-3745 May 30 j 16:10	20°♈52'22					
	-3745 Jun 17 j 15:52	0°♉		conjunction	-3740 Jul 24 j 07:42	0°☿52'45	1°10'58
	-3745 Aug 03 j 22:18	0°♊		minimum elong	-3740 Jul 24 j 07:32	0°☿52'29	1°11'07
	-3745 Sep 14 j 10:02	0°♋			-3740 Sep 05 j 13:07	0°♈	
	-3745 Oct 24 j 11:26	0°♌		morning rise	-3740 Sep 08 j 15:49	2°♈08'30	
	-3745 Dec 03 j 19:47	0°♍			-3740 Oct 18 j 08:22	0°♉	
	-3744 Jan 14 j 10:17	0°♋			-3740 Nov 28 j 15:12	0°♊	
	-3744 Feb 26 j 18:14	0°♌			-3739 Jan 07 j 20:45	0°♋	
evening set	-3744 Mar 20 j 15:26	15°♌21'49		desc. node	-3739 Jan 19 j 17:59	8°♌56'48	
asc. node	-3744 Apr 10 j 14:00	29°♌10'49			-3739 Feb 16 j 17:21	0°♌	
	-3744 Apr 11 j 20:03	0°♍			-3739 Mar 29 j 07:18	0°♎	
					-3739 May 11 j 16:15	0°♏	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 17

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3739 Jul 04 j 08:46	0° H		desc. node	-3734 Sep 11 j 11:05	16° M 28'24	
retrograde	-3739 Aug 14 j 08:10	9° H 55'04			-3734 Sep 29 j 04:28	0° L	
min. Earth dist.	-3739 Sep 15 j 03:38	3° H 02'34	0.54578 AU	evening set	-3734 Oct 30 j 04:52	24° L 08'51	
greatest brilliancy	-3739 Sep 21 j 00:25	0° H 47'01	-1.9m		-3734 Nov 06 j 15:33	0° M	
opposition	-3739 Sep 22 j 00:31	0° H 23'48	-3°-1'-45		-3734 Dec 14 j 17:43	0° J	
	-3739 Sep 23 j 01:21	30° R					
direct	-3739 Oct 27 j 12:45	22° R 26'25		conjunction	-3733 Jan 03 j 16:47	15° J 35'25	-1°-3'-32
asc. node	-3739 Dec 01 j 09:22	28° R 57'01		minimum elong	-3733 Jan 03 j 14:41	15° J 31'21	1°03'41
	-3739 Dec 04 j 10:53	0° H			-3733 Jan 22 j 09:19	0° L	
	-3738 Feb 06 j 04:51	0° Y		max. Earth dist.	-3733 Feb 21 j 01:49	22° L 22'40	2.41527 AU
	-3738 Mar 30 j 16:16	0° B			-3733 Mar 03 j 09:59	0° R	
	-3738 May 18 j 20:16	0° II		morning rise	-3733 Mar 11 j 01:33	5° R 34'42	
	-3738 Jul 04 j 13:08	0° L			-3733 Apr 14 j 10:41	0° H	
evening set	-3738 Jul 17 j 06:51	8° L 27'46			-3733 May 28 j 22:12	0° Y	
max. Earth dist.	-3738 Aug 04 j 01:34	20° L 29'15	2.54395 AU		-3733 Jul 15 j 09:07	0° B	
	-3738 Aug 17 j 20:46	0° L		asc. node	-3733 Jul 24 j 10:26	5° B 27'33	
					-3733 Sep 05 j 18:56	0° II	
conjunction	-3738 Sep 04 j 10:01	12° L 19'32	0°55'29	retrograde	-3733 Nov 30 j 22:29	29° II 06'11	
minimum elong	-3738 Sep 04 j 11:40	12° L 22'28	0°55'36	opposition	-3732 Jan 08 j 13:09	20° II 11'01	4°43'43
	-3738 Sep 28 j 23:34	0° M		greatest brilliancy	-3732 Jan 09 j 08:34	19° II 52'01	-1.4m
morning rise	-3738 Oct 26 j 12:03	20° M 21'13		min. Earth dist.	-3732 Jan 12 j 16:38	18° II 33'48	0.64222 AU
	-3738 Nov 08 j 07:20	0° L		direct	-3732 Feb 18 j 17:24	10° II 10'50	
desc. node	-3738 Dec 07 j 16:35	22° L 28'03			-3732 Apr 24 j 15:16	0° L	
	-3738 Dec 17 j 10:45	0° M			-3732 Jun 15 j 08:00	0° L	
	-3737 Jan 25 j 03:40	0° J		desc. node	-3732 Jul 29 j 09:39	0° M 07'47	
	-3737 Mar 05 j 07:13	0° L			-3732 Jul 29 j 05:19	0° M	
	-3737 Apr 14 j 22:58	0° R			-3732 Sep 07 j 15:20	0° L	
	-3737 May 28 j 15:20	0° H			-3732 Oct 26 j 09:04	0° M	
	-3737 Jul 18 j 05:51	0° Y			-3732 Nov 23 j 16:31	0° J	
retrograde	-3737 Sep 21 j 22:08	20° Y 36'36			-3731 Jan 01 j 14:20	0° L	
asc. node	-3737 Oct 19 j 09:32	15° Y 29'40		evening set	-3731 Jan 05 j 22:27	3° L 17'15	
min. Earth dist.	-3737 Oct 28 j 11:34	12° Y 01'40	0.63834 AU		-3731 Feb 10 j 22:06	0° R	
opposition	-3737 Oct 31 j 22:05	10° Y 38'48	0°29'38				
greatest brilliancy	-3737 Oct 31 j 19:35	10° Y 41'19	-1.4m	conjunction	-3731 Mar 07 j 14:16	17° R 41'46	0°-50'-27
direct	-3737 Dec 09 j 16:03	1° Y 27'51		minimum elong	-3731 Mar 07 j 16:29	17° R 45'40	0°50'33
	-3736 Mar 04 j 15:12	0° B			-3731 Mar 25 j 04:20	0° H	
	-3736 Apr 27 j 05:56	0° II		max. Earth dist.	-3731 Apr 11 j 19:09	12° H 04'48	2.54370 AU
	-3736 Jun 14 j 08:49	0° L		morning rise	-3731 May 02 j 10:54	25° H 57'19	
	-3736 Jul 28 j 23:58	0° L			-3731 May 08 j 13:27	0° Y	
evening set	-3736 Aug 31 j 09:25	23° L 46'06		asc. node	-3731 Jun 10 j 08:37	21° Y 19'55	
	-3736 Sep 08 j 21:44	0° M			-3731 Jun 23 j 23:12	0° B	
max. Earth dist.	-3736 Sep 18 j 23:33	7° M 27'41	2.42164 AU		-3731 Aug 11 j 10:04	0° II	
	-3736 Oct 18 j 18:36	0° L			-3731 Oct 02 j 02:02	0° L	
desc. node	-3736 Oct 24 j 13:32	4° L 27'01			-3731 Dec 04 j 19:49	0° L	
				retrograde	-3730 Jan 12 j 01:49	7° L 27'05	
conjunction	-3736 Oct 26 j 18:53	6° L 09'51	0°-1'-36		-3730 Feb 16 j 12:39	30° R	
minimum elong	-3736 Oct 26 j 18:47	6° L 09'40	0°01'37	opposition	-3730 Feb 17 j 06:03	29° L 44'08	4°54'21
behind sun begin	-3736 Oct 25 j 17:27	5° L 20'50		greatest brilliancy	-3730 Feb 19 j 00:34	29° L 05'08	-1.8m
behind sun end	-3736 Oct 27 j 20:07	6° L 58'33		min. Earth dist.	-3730 Feb 24 j 21:43	26° L 56'36	0.54983 AU
	-3736 Nov 26 j 09:35	0° M		direct	-3730 Mar 28 j 23:50	20° L 24'23	
morning rise	-3736 Dec 29 j 21:48	26° M 18'08			-3730 May 09 j 07:41	0° L	
	-3735 Jan 03 j 15:05	0° J		desc. node	-3730 Jun 16 j 08:30	19° L 41'49	
	-3735 Feb 11 j 08:13	0° L			-3730 Jul 02 j 20:19	0° M	
	-3735 Mar 23 j 09:49	0° R			-3730 Aug 15 j 02:02	0° L	
	-3735 May 04 j 16:11	0° H			-3730 Sep 24 j 03:44	0° M	
	-3735 Jun 19 j 05:09	0° Y			-3730 Nov 02 j 09:19	0° J	
	-3735 Aug 09 j 19:11	0° B			-3730 Dec 12 j 02:29	0° L	
asc. node	-3735 Sep 05 j 10:28	12° B 43'53			-3729 Jan 22 j 04:16	0° R	
retrograde	-3735 Oct 25 j 18:22	25° B 09'43		evening set	-3729 Mar 03 j 08:28	28° R 08'05	
opposition	-3735 Dec 04 j 14:28	15° B 31'20	3°05'20		-3729 Mar 06 j 01:50	0° H	
greatest brilliancy	-3735 Dec 04 j 13:50	15° B 31'58	-1.3m		-3729 Apr 19 j 20:19	0° Y	
min. Earth dist.	-3735 Dec 04 j 22:14	15° B 23'34	0.67212 AU				
direct	-3734 Jan 14 j 06:13	5° B 41'15		conjunction	-3729 Apr 24 j 21:32	3° Y 18'57	0°-1'-58
	-3734 Apr 01 j 05:57	0° II		minimum elong	-3729 Apr 24 j 21:39	3° Y 19'08	0°01'58
	-3734 May 24 j 02:37	0° L		behind sun begin	-3729 Apr 24 j 00:52	2° Y 45'06	
	-3734 Jul 09 j 02:42	0° L		behind sun end	-3729 Apr 25 j 18:26	3° Y 53'09	
	-3734 Aug 20 j 08:43	0° M		asc. node	-3729 Apr 28 j 06:31	5° Y 31'29	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 18

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

max. Earth dist.	-3729 May 10 j 18:54	13° Υ 40'31	2.63353 AU	direct	-3724 Oct 07 j 00:58	4° \approx 25'30	
	-3729 Jun 05 j 03:07	0° \mathcal{B}		asc. node	-3724 Dec 18 j 00:28	27° \approx 03'29	
morning rise	-3729 Jun 12 j 17:25	4° \mathcal{B} 51'13			-3724 Dec 23 j 20:43	0° \mathcal{H}	
	-3729 Jul 22 j 09:42	0° Π			-3723 Feb 16 j 05:02	0° Υ	
	-3729 Sep 08 j 08:34	0° \mathcal{E}			-3723 Apr 07 j 14:38	0° \mathcal{B}	
	-3729 Oct 27 j 10:10	0° Ω			-3723 May 26 j 00:42	0° Π	
	-3729 Dec 18 j 22:57	0° \mathcal{M}		evening set	-3723 Jul 01 j 11:40	23° Π 25'13	
retrograde	-3728 Mar 12 j 09:46	28° \mathcal{M} 53'36			-3723 Jul 11 j 12:06	0° \mathcal{E}	
opposition	-3728 Apr 13 j 09:50	23° \mathcal{M} 07'11	1°19'50	max. Earth dist.	-3723 Jul 22 j 16:24	7° \mathcal{E} 25'32	2.58384 AU
greatest brilliancy	-3728 Apr 14 j 00:58	22° \mathcal{M} 55'41	-2.6m				
min. Earth dist.	-3728 Apr 20 j 15:29	20° \mathcal{M} 55'43	0.42165 AU	conjunction	-3723 Aug 18 j 04:37	25° \mathcal{E} 23'23	1°06'04
desc. node	-3728 May 03 j 09:31	17° \mathcal{M} 43'59		minimum elong	-3723 Aug 18 j 05:37	25° \mathcal{E} 25'07	1°06'12
direct	-3728 May 17 j 23:18	16° \mathcal{M} 17'46			-3723 Aug 24 j 20:56	0° Ω	
	-3728 Jul 05 j 13:07	0° $\underline{\mathcal{A}}$		morning rise	-3723 Oct 06 j 07:03	0° \mathcal{M} 03'51	
	-3728 Aug 24 j 16:19	0° \mathcal{M}			-3723 Oct 06 j 04:55	0° \mathcal{M}	
	-3728 Oct 06 j 22:04	0° \mathcal{A}			-3723 Nov 15 j 20:04	0° $\underline{\mathcal{A}}$	
	-3728 Nov 18 j 03:41	0° \mathcal{B}		desc. node	-3723 Dec 24 j 09:39	29° $\underline{\mathcal{A}}$ 18'05	
	-3728 Dec 31 j 01:50	0° \approx			-3723 Dec 25 j 07:32	0° \mathcal{M}	
	-3727 Feb 13 j 08:32	0° \mathcal{H}			-3722 Feb 02 j 08:28	0° \mathcal{A}	
asc. node	-3727 Mar 15 j 03:22	19° \mathcal{H} 38'38			-3722 Mar 13 j 20:38	0° \mathcal{B}	
	-3727 Mar 31 j 01:32	0° Υ			-3722 Apr 24 j 02:09	0° \approx	
evening set	-3727 Apr 15 j 19:03	10° Υ 09'20			-3722 Jun 08 j 07:02	0° \mathcal{H}	
	-3727 May 16 j 18:35	0° \mathcal{B}			-3722 Aug 06 j 16:25	0° Υ	
				retrograde	-3722 Sep 07 j 16:21	6° Υ 03'55	
conjunction	-3727 Jun 02 j 21:19	10° \mathcal{B} 54'56	0°41'57		-3722 Oct 07 j 13:28	30° \mathcal{R} \mathcal{H}	
minimum elong	-3727 Jun 02 j 20:04	10° \mathcal{B} 52'58	0°42'02	min. Earth dist.	-3722 Oct 12 j 12:50	28° \mathcal{H} 04'51	0.60841 AU
max. Earth dist.	-3727 Jun 03 j 08:00	11° \mathcal{B} 11'59	2.67060 AU	opposition	-3722 Oct 17 j 09:37	26° \mathcal{H} 08'35	0°-46'-2
	-3727 Jul 02 j 19:07	0° Π		greatest brilliancy	-3722 Oct 17 j 05:02	26° \mathcal{H} 13'08	-1.6m
morning rise	-3727 Jul 18 j 12:24	10° Π 03'48		asc. node	-3722 Nov 05 j 01:22	19° \mathcal{H} 45'03	
	-3727 Aug 18 j 11:23	0° \mathcal{E}		direct	-3722 Nov 24 j 01:05	17° \mathcal{H} 21'31	
	-3727 Oct 03 j 11:33	0° Ω			-3721 Jan 14 j 19:10	0° Υ	
	-3727 Nov 17 j 21:33	0° \mathcal{M}			-3721 Mar 16 j 01:27	0° \mathcal{B}	
	-3726 Jan 02 j 03:58	0° $\underline{\mathcal{A}}$			-3721 May 06 j 07:11	0° Π	
	-3726 Feb 17 j 11:24	0° \mathcal{M}			-3721 Jun 22 j 17:04	0° \mathcal{E}	
desc. node	-3726 Mar 21 j 11:11	19° \mathcal{M} 12'59			-3721 Aug 06 j 04:00	0° Ω	
	-3726 Apr 11 j 00:11	0° \mathcal{A}		evening set	-3721 Aug 13 j 05:42	4° Ω 56'30	
retrograde	-3726 May 30 j 11:23	13° \mathcal{A} 45'48		max. Earth dist.	-3721 Aug 28 j 09:41	15° Ω 41'56	2.47098 AU
min. Earth dist.	-3726 Jun 26 j 18:14	9° \mathcal{A} 18'56	0.38605 AU		-3721 Sep 17 j 03:00	0° \mathcal{M}	
greatest brilliancy	-3726 Jun 30 j 01:29	8° \mathcal{A} 23'23	-2.8m				
opposition	-3726 Jul 01 j 07:31	8° \mathcal{A} 02'15	-6°-10'-32	conjunction	-3721 Oct 05 j 02:27	13° \mathcal{M} 19'44	0°25'24
direct	-3726 Jul 31 j 04:31	2° \mathcal{A} 54'52		minimum elong	-3721 Oct 05 j 03:55	13° \mathcal{M} 22'29	0°25'25
	-3726 Oct 16 j 01:36	0° \mathcal{B}			-3721 Oct 27 j 03:20	0° $\underline{\mathcal{A}}$	
	-3726 Dec 05 j 15:19	0° \approx		desc. node	-3721 Nov 11 j 07:41	11° $\underline{\mathcal{A}}$ 39'46	
	-3725 Jan 22 j 15:14	0° \mathcal{H}		morning rise	-3721 Dec 03 j 01:24	28° $\underline{\mathcal{A}}$ 32'48	
asc. node	-3725 Jan 31 j 00:34	5° \mathcal{H} 16'21			-3721 Dec 04 j 22:06	0° \mathcal{M}	
	-3725 Mar 11 j 09:48	0° Υ			-3720 Jan 12 j 06:50	0° \mathcal{A}	
	-3725 Apr 28 j 04:57	0° \mathcal{B}		greatest brilliancy	-3720 Feb 07 j 16:52	20° \mathcal{A} 29'58	1.2m
evening set	-3725 May 24 j 21:33	16° \mathcal{B} 50'53			-3720 Feb 20 j 02:20	0° \mathcal{B}	
	-3725 Jun 14 j 13:32	0° Π			-3720 Mar 31 j 06:40	0° \approx	
max. Earth dist.	-3725 Jun 27 j 01:44	8° Π 01'29	2.65328 AU		-3720 May 12 j 20:18	0° \mathcal{H}	
					-3720 Jun 28 j 09:42	0° Υ	
conjunction	-3725 Jul 10 j 10:20	16° Π 39'25	1°07'46		-3720 Aug 24 j 00:19	0° \mathcal{B}	
minimum elong	-3725 Jul 10 j 09:36	16° Π 38'13	1°07'54	asc. node	-3720 Sep 22 j 01:27	9° \mathcal{B} 48'08	
	-3725 Jul 30 j 20:28	0° \mathcal{E}		retrograde	-3720 Oct 12 j 07:56	12° \mathcal{B} 14'16	
morning rise	-3725 Aug 24 j 21:45	16° \mathcal{E} 38'31		min. Earth dist.	-3720 Nov 20 j 05:06	2° \mathcal{B} 53'01	0.66640 AU
	-3725 Sep 13 j 15:59	0° Ω		opposition	-3720 Nov 21 j 08:55	2° \mathcal{B} 25'03	2°11'31
	-3725 Oct 26 j 22:35	0° \mathcal{M}		greatest brilliancy	-3720 Nov 21 j 04:38	2° \mathcal{B} 29'22	-1.3m
	-3725 Dec 07 j 20:57	0° $\underline{\mathcal{A}}$			-3720 Nov 27 j 11:29	30° \mathcal{R} Υ	
	-3724 Jan 17 j 21:14	0° \mathcal{M}		direct	-3720 Dec 31 j 10:37	22° Υ 46'59	
desc. node	-3724 Feb 06 j 10:48	14° \mathcal{M} 24'43			-3719 Feb 07 j 04:19	0° \mathcal{B}	
	-3724 Feb 27 j 16:46	0° \mathcal{A}			-3719 Apr 12 j 05:53	0° Π	
	-3724 Apr 09 j 18:17	0° \mathcal{B}			-3719 Jun 01 j 11:56	0° \mathcal{E}	
	-3724 May 27 j 03:25	0° \approx			-3719 Jul 16 j 19:03	0° Ω	
retrograde	-3724 Jul 27 j 17:22	20° \approx 33'12			-3719 Aug 27 j 20:25	0° \mathcal{M}	
min. Earth dist.	-3724 Aug 26 j 08:50	14° \approx 31'47	0.49709 AU	desc. node	-3719 Sep 28 j 04:31	23° \mathcal{M} 30'22	
greatest brilliancy	-3724 Sep 01 j 12:57	12° \approx 16'04	-2.1m	evening set	-3719 Oct 04 j 21:33	28° \mathcal{M} 38'40	
opposition	-3724 Sep 03 j 04:04	11° \approx 40'02	-4°-34'-9		-3719 Oct 06 j 15:52	0° $\underline{\mathcal{A}}$	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 19

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3719 Nov 14 j 03:45	0°♄				-3714 Nov 07 j 05:41	0°♄	
						-3713 Jan 10 j 11:24	0°♄	
conjunction	-3719 Dec 06 j 17:03	17°♄45'50	0°-45'-43	retrograde		-3713 Feb 14 j 21:42	6°♄33'32	
minimum elong	-3719 Dec 06 j 13:50	17°♄39'31	0°45'49	opposition		-3713 Mar 20 j 17:38	29°♄56'54	3°27'00
	-3719 Dec 22 j 06:28	0°♄				-3713 Mar 20 j 13:54	30°♄♄	
max. Earth dist.	-3719 Dec 23 j 20:32	1°♄14'40	2.37682 AU	greatest brilliancy		-3713 Mar 22 j 08:26	29°♄24'31	-2.2m
	-3718 Jan 29 j 21:36	0°♄		min. Earth dist.		-3713 Mar 29 j 05:55	27°♄07'15	0.47155 AU
morning rise	-3718 Feb 12 j 23:29	10°♄42'34		direct		-3713 Apr 26 j 23:03	21°♄51'56	
	-3718 Mar 10 j 21:06	0°♄		desc. node		-3713 May 21 j 02:22	25°♄37'18	
	-3718 Apr 21 j 21:42	0°♄				-3713 Jun 02 j 13:40	0°♄	
	-3718 Jun 05 j 14:12	0°♄				-3713 Jul 26 j 17:34	0°♄	
	-3718 Jul 23 j 23:15	0°♄				-3713 Sep 07 j 18:20	0°♄	
asc. node	-3718 Aug 10 j 01:21	9°♄48'36				-3713 Oct 18 j 13:33	0°♄	
	-3718 Sep 18 j 12:50	0°♄				-3713 Nov 28 j 09:22	0°♄	
retrograde	-3718 Nov 16 j 09:36	15°♄51'56				-3712 Jan 09 j 08:00	0°♄	
opposition	-3718 Dec 25 j 15:09	6°♄37'00	4°13'07			-3712 Feb 21 j 21:58	0°♄	
greatest brilliancy	-3718 Dec 26 j 01:20	6°♄26'55	-1.3m	evening set		-3712 Mar 30 j 11:30	24°♄58'47	
min. Earth dist.	-3718 Dec 28 j 06:45	5°♄34'05	0.66167 AU	asc. node		-3712 Mar 31 j 18:48	25°♄50'06	
	-3717 Jan 12 j 22:48	30°♄♄				-3712 Apr 07 j 03:39	0°♄	
direct	-3717 Feb 04 j 19:18	26°♄36'40						
	-3717 Mar 01 j 11:12	0°♄		conjunction		-3712 May 18 j 22:38	27°♄00'02	0°26'37
	-3717 May 08 j 03:59	0°♄		minimum elong		-3712 May 18 j 21:40	26°♄58'30	0°26'41
	-3717 Jun 25 j 12:48	0°♄				-3712 May 23 j 15:01	0°♄	
	-3717 Aug 07 j 12:49	0°♄		max. Earth dist.		-3712 May 25 j 01:00	0°♄54'23	2.66257 AU
desc. node	-3717 Aug 16 j 02:31	6°♄16'28		morning rise		-3712 Jul 04 j 10:56	26°♄40'50	
	-3717 Sep 16 j 14:52	0°♄				-3712 Jul 09 j 16:03	0°♄	
	-3717 Oct 25 j 04:26	0°♄				-3712 Aug 25 j 16:50	0°♄	
	-3717 Dec 02 j 08:35	0°♄				-3712 Oct 11 j 13:12	0°♄	
evening set	-3717 Dec 11 j 18:30	7°♄21'19				-3712 Nov 27 j 14:20	0°♄	
	-3716 Jan 10 j 02:45	0°♄				-3711 Jan 15 j 02:57	0°♄	
						-3711 Mar 11 j 17:55	0°♄	
conjunction	-3716 Feb 13 j 18:56	25°♄59'04	-1°-3'-33	desc. node		-3711 Apr 07 j 02:31	9°♄36'21	
minimum elong	-3716 Feb 13 j 20:40	26°♄02'16	1°03'41	retrograde		-3711 Apr 30 j 01:04	12°♄45'10	
	-3716 Feb 19 j 06:26	0°♄		opposition		-3711 May 30 j 09:57	7°♄42'33	-3°-49'-48
max. Earth dist.	-3716 Mar 28 j 00:02	26°♄57'10	2.49605 AU	greatest brilliancy		-3711 May 30 j 11:09	7°♄41'46	-2.9m
	-3716 Apr 01 j 09:03	0°♄		min. Earth dist.		-3711 May 31 j 03:13	7°♄31'05	0.37748 AU
morning rise	-3716 Apr 13 j 16:12	8°♄28'46		direct		-3711 Jun 29 j 19:18	2°♄36'17	
	-3716 May 15 j 16:54	0°♄				-3711 Sep 13 j 02:28	0°♄	
asc. node	-3716 Jun 27 j 00:42	27°♄17'21				-3711 Oct 31 j 09:53	0°♄	
	-3716 Jul 01 j 08:13	0°♄				-3711 Dec 16 j 06:08	0°♄	
	-3716 Aug 19 j 17:59	0°♄				-3710 Jan 31 j 05:46	0°♄	
	-3716 Oct 13 j 22:52	0°♄		asc. node		-3710 Feb 16 j 16:46	10°♄37'25	
retrograde	-3716 Dec 24 j 22:29	21°♄45'31				-3710 Mar 18 j 23:12	0°♄	
opposition	-3715 Jan 31 j 06:07	13°♄29'32	5°05'19			-3710 May 05 j 05:26	0°♄	
greatest brilliancy	-3715 Feb 01 j 16:57	12°♄56'29	-1.6m	evening set		-3710 May 10 j 00:14	3°♄01'58	
min. Earth dist.	-3715 Feb 06 j 15:42	11°♄04'22	0.59307 AU	max. Earth dist.		-3710 Jun 17 j 21:49	27°♄46'34	2.66640 AU
direct	-3715 Mar 12 j 21:29	3°♄44'41				-3710 Jun 21 j 09:15	0°♄	
	-3715 May 27 j 18:28	0°♄						
desc. node	-3715 Jul 03 j 02:35	22°♄32'53		conjunction		-3710 Jun 25 j 20:22	2°♄51'34	1°00'29
	-3715 Jul 14 j 02:27	0°♄		minimum elong		-3710 Jun 25 j 19:14	2°♄49'45	1°00'36
	-3715 Aug 24 j 16:35	0°♄				-3710 Aug 06 j 18:17	0°♄	
	-3715 Oct 03 j 00:12	0°♄		morning rise		-3710 Aug 10 j 00:28	2°♄08'05	
	-3715 Nov 10 j 17:38	0°♄				-3710 Sep 20 j 22:35	0°♄	
	-3715 Dec 20 j 00:30	0°♄				-3710 Nov 03 j 20:20	0°♄	
	-3714 Jan 29 j 16:55	0°♄				-3710 Dec 16 j 16:18	0°♄	
evening set	-3714 Feb 11 j 06:26	9°♄00'01				-3709 Jan 27 j 20:51	0°♄	
	-3714 Mar 13 j 06:40	0°♄		desc. node		-3709 Feb 23 j 03:47	18°♄39'21	
						-3709 Mar 11 j 09:00	0°♄	
conjunction	-3714 Apr 07 j 13:25	17°♄10'50	0°-21'-23			-3709 Apr 25 j 22:31	0°♄	
minimum elong	-3714 Apr 07 j 14:27	17°♄12'34	0°21'26	retrograde		-3709 Jul 08 j 16:17	27°♄55'07	
	-3714 Apr 26 j 19:46	0°♄		min. Earth dist.		-3709 Aug 05 j 06:12	22°♄46'27	0.44707 AU
max. Earth dist.	-3714 Apr 30 j 13:33	2°♄27'52	2.60446 AU	greatest brilliancy		-3709 Aug 11 j 05:13	20°♄46'12	-2.4m
asc. node	-3714 May 14 j 21:36	11°♄50'34		opposition		-3709 Aug 13 j 06:23	20°♄04'23	-5°-56'-17
morning rise	-3714 May 28 j 14:00	20°♄42'11		direct		-3709 Sep 14 j 10:32	13°♄41'03	
	-3714 Jun 12 j 01:43	0°♄				-3709 Nov 11 j 06:06	0°♄	
	-3714 Jul 29 j 15:22	0°♄		asc. node		-3708 Jan 04 j 15:34	28°♄57'51	
	-3714 Sep 16 j 13:09	0°♄				-3708 Jan 06 j 10:46	0°♄	

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3708 Feb 26 j 01:44	0°♄					-3703 Mar 18 j 10:29	0°♁			
	-3708 Apr 15 j 03:47	0°♂					-3703 Apr 29 j 13:07	0°♂			
	-3708 Jun 02 j 01:14	0°♂					-3703 Jun 13 j 15:21	0°♄			
evening set	-3708 Jun 16 j 06:42	9°♂05'36					-3703 Aug 02 j 14:30	0°♂			
max. Earth dist.	-3708 Jul 11 j 17:14	25°♂36'21	2.61691 AU		asc. node		-3703 Aug 26 j 16:04	12°♂37'57			
	-3708 Jul 18 j 09:30	0°♂					-3703 Oct 10 j 15:14	0°♂			
					retrograde		-3703 Nov 02 j 13:19	2°♂59'08			
conjunction	-3708 Aug 02 j 03:42	9°♂48'30	1°10'42				-3703 Nov 23 j 20:55	30°♂			
minimum elong	-3708 Aug 02 j 03:58	9°♂48'56	1°10'50		opposition		-3703 Dec 12 j 05:39	23°♂28'14	3°32'46		
	-3708 Aug 31 j 21:24	0°♂			greatest brilliancy		-3703 Dec 12 j 08:15	23°♂25'39	-1.3m		
morning rise	-3708 Sep 18 j 06:16	12°♂04'14			min. Earth dist.		-3703 Dec 13 j 09:18	23°♂00'40	0.67127 AU		
	-3708 Oct 13 j 12:39	0°♂			direct		-3702 Jan 22 j 03:37	13°♂33'21			
	-3708 Nov 23 j 13:47	0°♂					-3702 Mar 23 j 12:28	0°♂			
	-3707 Jan 02 j 12:15	0°♂					-3702 May 18 j 05:26	0°♂			
desc. node	-3707 Jan 10 j 03:02	5°♂46'32					-3702 Jul 03 j 22:36	0°♂			
	-3707 Feb 11 j 00:38	0°♂					-3702 Aug 15 j 10:44	0°♂			
	-3707 Mar 23 j 02:30	0°♂			desc. node		-3702 Sep 01 j 21:08	12°♂54'59			
	-3707 May 04 j 09:00	0°♂					-3702 Sep 24 j 08:55	0°♂			
	-3707 Jun 21 j 23:59	0°♂					-3702 Nov 01 j 20:45	0°♂			
retrograde	-3707 Aug 23 j 13:03	20°♂11'41			evening set		-3702 Nov 14 j 07:35	9°♂48'25			
min. Earth dist.	-3707 Sep 25 j 11:44	12°♂54'10	0.57003 AU				-3702 Dec 09 j 23:10	0°♂			
opposition	-3707 Oct 01 j 17:01	10°♂28'13	-2°-10'-9				-3701 Jan 17 j 14:53	0°♂			
greatest brilliancy	-3707 Oct 01 j 01:02	10°♂43'50	-1.7m								
direct	-3707 Nov 07 j 01:09	2°♂11'10			conjunction		-3701 Jan 19 j 02:56	1°♂08'55	-1°-7'-18		
asc. node	-3707 Nov 21 j 15:37	3°♂27'33			minimum elong		-3701 Jan 19 j 02:26	1°♂07'57	1°07'28		
	-3706 Jan 29 j 17:56	0°♄					-3701 Feb 26 j 15:21	0°♁			
	-3706 Mar 25 j 03:04	0°♂			max. Earth dist.		-3701 Mar 09 j 07:11	7°♁45'45	2.44357 AU		
	-3706 May 13 j 22:17	0°♂			morning rise		-3701 Mar 24 j 10:13	18°♁36'23			
	-3706 Jun 29 j 20:51	0°♂					-3701 Apr 09 j 15:19	0°♂			
evening set	-3706 Jul 26 j 17:40	17°♂57'50					-3701 May 23 j 23:39	0°♄			
max. Earth dist.	-3706 Aug 11 j 23:02	29°♂06'30	2.51896 AU				-3701 Jul 10 j 00:38	0°♂			
	-3706 Aug 13 j 05:50	0°♂			asc. node		-3701 Jul 14 j 15:17	2°♂50'09			
							-3701 Aug 29 j 23:14	0°♂			
conjunction	-3706 Sep 14 j 23:37	23°♂13'15	0°46'25				-3701 Nov 01 j 13:04	0°♂			
minimum elong	-3706 Sep 15 j 01:26	23°♂16'33	0°46'30		retrograde		-3701 Dec 09 j 15:54	7°♂24'07			
	-3706 Sep 24 j 07:24	0°♂					-3700 Jan 13 j 11:19	30°♂			
	-3706 Nov 03 j 12:32	0°♂			opposition		-3700 Jan 16 j 21:11	28°♂41'30	4°55'48		
morning rise	-3706 Nov 08 j 05:48	3°♂35'32			greatest brilliancy		-3700 Jan 17 j 22:09	28°♂17'18	-1.4m		
desc. node	-3706 Nov 28 j 00:46	18°♂46'39			min. Earth dist.		-3700 Jan 21 j 20:39	26°♂45'58	0.62737 AU		
	-3706 Dec 12 j 12:37	0°♂			direct		-3700 Feb 26 j 23:34	18°♂44'20			
	-3705 Jan 20 j 02:12	0°♂					-3700 Apr 13 j 21:43	0°♂			
	-3705 Feb 28 j 02:05	0°♂					-3700 Jun 08 j 20:19	0°♂			
	-3705 Apr 09 j 11:59	0°♁			desc. node		-3700 Jul 19 j 19:08	27°♂17'19			
	-3705 May 22 j 14:51	0°♂					-3700 Jul 23 j 15:15	0°♂			
	-3705 Jul 10 j 02:01	0°♄					-3700 Sep 02 j 09:40	0°♂			
retrograde	-3705 Sep 29 j 19:18	28°♄56'25					-3700 Oct 11 j 07:29	0°♂			
asc. node	-3705 Oct 09 j 16:23	28°♄16'31					-3700 Nov 18 j 17:46	0°♂			
min. Earth dist.	-3705 Nov 06 j 06:07	20°♄03'58	0.65103 AU				-3700 Dec 27 j 17:58	0°♂			
opposition	-3705 Nov 08 j 21:18	19°♄00'27	1°09'29		evening set		-3699 Jan 19 j 17:49	17°♂13'47			
greatest brilliancy	-3705 Nov 08 j 16:49	19°♄04'57	-1.4m				-3699 Feb 06 j 03:40	0°♁			
direct	-3705 Dec 18 j 04:15	9°♄38'38									
	-3704 Feb 25 j 14:58	0°♂			conjunction		-3699 Mar 19 j 09:49	29°♁15'44	0°-40'-32		
	-3704 Apr 21 j 14:34	0°♂			minimum elong		-3699 Mar 19 j 11:44	29°♁19'04	0°40'37		
	-3704 Jun 09 j 09:12	0°♂					-3699 Mar 20 j 11:24	0°♂			
	-3704 Jul 24 j 06:03	0°♂			max. Earth dist.		-3699 Apr 19 j 03:06	20°♂11'38	2.56723 AU		
	-3704 Sep 04 j 05:21	0°♂					-3699 May 03 j 20:32	0°♄			
evening set	-3704 Sep 12 j 03:14	5°♂50'54			morning rise		-3699 May 12 j 08:30	5°♄35'45			
max. Earth dist.	-3704 Oct 08 j 06:01	25°♂32'13	2.39679 AU		asc. node		-3699 May 31 j 14:24	18°♄07'09			
desc. node	-3704 Oct 14 j 23:12	0°♂41'02					-3699 Jun 19 j 03:28	0°♂			
	-3704 Oct 14 j 01:51	0°♂					-3699 Aug 06 j 04:13	0°♂			
							-3699 Sep 25 j 13:09	0°♂			
conjunction	-3704 Nov 09 j 20:20	20°♂45'29	0°-18'-17				-3699 Nov 21 j 09:51	0°♂			
minimum elong	-3704 Nov 09 j 18:52	20°♂42'37	0°18'19		retrograde		-3698 Jan 23 j 09:16	17°♂35'17			
	-3704 Nov 21 j 15:24	0°♂			opposition		-3698 Feb 27 j 20:12	10°♂13'38	4°34'23		
	-3704 Dec 29 j 19:19	0°♂			greatest brilliancy		-3698 Mar 01 j 16:35	9°♂34'02	-1.9m		
morning rise	-3703 Jan 15 j 09:09	12°♂57'12			min. Earth dist.		-3698 Mar 08 j 01:20	7°♂18'42	0.52311 AU		
	-3703 Feb 06 j 10:55	0°♂			direct		-3698 Apr 07 j 21:40	1°♂14'32			

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 21

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

desc. node	-3698 Jun 06 j 18:53	19°♂58'33		max. Earth dist.	-3693 Jul 02 j 15:49	14°♂34'34	2.64263 AU
	-3698 Jun 24 j 09:17	0°♎					
	-3698 Aug 08 j 11:54	0°♊		conjunction	-3693 Jul 18 j 21:28	25°♂08'43	1°10'09
	-3698 Sep 18 j 06:25	0°♋		minimum elong	-3693 Jul 18 j 21:03	25°♂08'02	1°10'18
	-3698 Oct 27 j 21:36	0°♌			-3693 Jul 26 j 06:51	0°♍	
	-3698 Dec 06 j 21:50	0°♎		morning rise	-3693 Sep 02 j 18:38	25°♍45'36	
	-3697 Jan 17 j 05:04	0°♏			-3693 Sep 08 j 23:48	0°♎	
	-3697 Mar 01 j 07:02	0°♐			-3693 Oct 22 j 00:32	0°♏	
evening set	-3697 Mar 13 j 23:28	8°♐35'43			-3693 Dec 02 j 14:28	0°♊	
	-3697 Apr 15 j 04:18	0°♑			-3692 Jan 12 j 03:43	0°♋	
asc. node	-3697 Apr 18 j 11:34	2°♑09'58		desc. node	-3692 Jan 27 j 20:41	11°♋43'22	
					-3692 Feb 21 j 08:57	0°♌	
conjunction	-3697 May 04 j 06:38	12°♑27'38	0°09'02		-3692 Apr 02 j 10:36	0°♍	
minimum elong	-3697 May 04 j 06:14	12°♑27'01	0°09'03		-3692 May 16 j 22:32	0°♎	
behind sun begin	-3697 May 03 j 13:13	11°♑59'24			-3692 Jul 19 j 08:57	0°♏	
behind sun end	-3697 May 04 j 23:16	12°♑54'36		retrograde	-3692 Aug 07 j 00:15	2°♏20'56	
max. Earth dist.	-3697 May 16 j 12:28	20°♑22'45	2.64613 AU		-3692 Aug 24 j 23:40	30°♏	
	-3697 May 31 j 11:50	0°♐		min. Earth dist.	-3692 Sep 06 j 20:52	25°♏51'01	0.52463 AU
morning rise	-3697 Jun 21 j 03:25	13°♐11'00		greatest brilliancy	-3692 Sep 12 j 23:01	23°♏32'58	-2.0m
	-3697 Jul 17 j 15:21	0°♑		opposition	-3692 Sep 14 j 05:45	23°♏03'52	-3°-41'-12
	-3697 Sep 03 j 04:31	0°♒		direct	-3692 Oct 19 j 01:11	15°♏24'30	
	-3697 Oct 21 j 06:29	0°♓		asc. node	-3692 Dec 08 j 06:41	27°♏48'42	
	-3697 Dec 10 j 02:10	0°♎			-3692 Dec 13 j 09:11	0°♏	
	-3696 Feb 05 j 02:41	0°♊			-3691 Feb 09 j 21:29	0°♑	
retrograde	-3696 Mar 29 j 00:37	13°♊45'49			-3691 Apr 02 j 09:42	0°♒	
desc. node	-3696 Apr 23 j 19:37	9°♊54'58			-3691 May 21 j 06:10	0°♓	
opposition	-3696 Apr 29 j 05:50	8°♊23'58	0°-23'-5		-3691 Jul 06 j 21:28	0°♍	
greatest brilliancy	-3696 Apr 29 j 08:38	8°♊21'57	-2.7m	evening set	-3691 Jul 10 j 10:10	2°♍19'49	
min. Earth dist.	-3696 May 04 j 18:59	6°♊49'10	0.39955 AU	max. Earth dist.	-3691 Jul 29 j 13:21	15°♍07'36	2.56269 AU
direct	-3696 Jun 01 j 01:20	2°♊19'19			-3691 Aug 20 j 06:49	0°♎	
	-3696 Aug 14 j 04:43	0°♋					
	-3696 Sep 29 j 09:09	0°♌		conjunction	-3691 Aug 27 j 19:35	5°♎14'41	1°00'45
	-3696 Nov 11 j 21:29	0°♍		minimum elong	-3691 Aug 27 j 20:59	5°♎17'08	1°00'52
	-3696 Dec 25 j 13:10	0°♎			-3691 Oct 01 j 12:51	0°♏	
	-3695 Feb 08 j 07:00	0°♏		morning rise	-3691 Oct 17 j 10:14	11°♏38'18	
asc. node	-3695 Mar 05 j 08:35	16°♏26'33			-3691 Nov 11 j 00:40	0°♊	
	-3695 Mar 26 j 06:48	0°♑		desc. node	-3691 Dec 14 j 19:49	25°♊45'52	
evening set	-3695 Apr 24 j 18:24	18°♑54'39			-3691 Dec 20 j 07:51	0°♋	
	-3695 May 12 j 03:42	0°♒			-3690 Jan 28 j 03:57	0°♌	
max. Earth dist.	-3695 Jun 08 j 16:26	17°♒32'14	2.67139 AU		-3690 Mar 08 j 10:17	0°♍	
					-3690 Apr 18 j 05:38	0°♎	
conjunction	-3695 Jun 11 j 07:12	19°♒12'18	0°49'39		-3690 Jun 01 j 08:25	0°♏	
minimum elong	-3695 Jun 11 j 05:55	19°♒10'15	0°49'45		-3690 Jul 24 j 01:51	0°♑	
	-3695 Jun 28 j 04:54	0°♓		retrograde	-3690 Sep 15 j 22:46	14°♑58'44	
morning rise	-3695 Jul 26 j 15:31	18°♓16'14		min. Earth dist.	-3690 Oct 21 j 18:47	6°♑39'21	0.62610 AU
	-3695 Aug 13 j 18:04	0°♍		opposition	-3690 Oct 25 j 20:56	5°♑01'09	0°00'-57
	-3695 Sep 28 j 10:09	0°♎		greatest brilliancy	-3690 Oct 25 j 21:55	5°♑00'10	-1.5m
	-3695 Nov 12 j 04:43	0°♏		asc. node	-3690 Oct 26 j 06:29	4°♑51'37	
	-3695 Dec 26 j 08:58	0°♊			-3690 Nov 08 j 11:28	30°♒♐	
	-3694 Feb 08 j 15:06	0°♋		direct	-3690 Dec 03 j 04:22	26°♐00'07	
desc. node	-3694 Mar 11 j 19:46	20°♋29'11			-3690 Dec 30 j 05:44	0°♑	
	-3694 Mar 27 j 01:48	0°♌			-3689 Mar 09 j 11:37	0°♒	
	-3694 Jun 02 j 14:33	0°♍			-3689 May 01 j 00:43	0°♓	
retrograde	-3694 Jun 14 j 22:43	1°♍02'15			-3689 Jun 17 j 21:08	0°♍	
	-3694 Jun 27 j 03:29	30°♒♌			-3689 Aug 01 j 11:49	0°♎	
min. Earth dist.	-3694 Jul 11 j 12:38	26°♌32'15	0.40333 AU	evening set	-3689 Aug 23 j 21:11	15°♎47'39	
greatest brilliancy	-3694 Jul 16 j 06:21	25°♌07'37	-2.7m	max. Earth dist.	-3689 Sep 08 j 23:16	27°♎26'17	2.44350 AU
opposition	-3694 Jul 18 j 01:51	24°♌34'58	-6°-33'-9		-3689 Sep 12 j 11:11	0°♏	
direct	-3694 Aug 17 j 13:27	19°♌05'13					
	-3694 Oct 01 j 11:56	0°♍		conjunction	-3689 Oct 17 j 13:58	26°♏17'36	0°10'38
	-3694 Nov 27 j 21:39	0°♎		minimum elong	-3689 Oct 17 j 14:42	26°♏18'58	0°10'38
	-3693 Jan 16 j 16:56	0°♏		behind sun begin	-3689 Oct 16 j 19:44	25°♏42'54	
asc. node	-3693 Jan 21 j 07:14	2°♏49'24		behind sun end	-3689 Oct 18 j 09:39	26°♏55'05	
	-3693 Mar 06 j 06:16	0°♑			-3689 Oct 22 j 10:30	0°♊	
	-3693 Apr 23 j 10:44	0°♒		desc. node	-3689 Nov 01 j 16:43	7°♊52'59	
evening set	-3693 Jun 02 j 08:50	25°♒09'23			-3689 Nov 30 j 03:30	0°♋	
	-3693 Jun 09 j 23:24	0°♓		morning rise	-3689 Dec 18 j 10:31	14°♋20'00	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 22

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3688 Jan 07 j 10:17	0°♊		desc. node	-3683 Jun 23 j 11:21	20°♏57'03	
	-3688 Feb 15 j 03:52	0°♋			-3683 Jul 07 j 09:02	0°♍	
	-3688 Mar 26 j 05:18	0°♌			-3683 Aug 18 j 20:04	0°♎	
	-3688 May 07 j 12:41	0°♍			-3683 Sep 27 j 13:21	0°♏	
	-3688 Jun 22 j 08:02	0°♎			-3683 Nov 05 j 12:47	0°♐	
	-3688 Aug 14 j 07:34	0°♏			-3683 Dec 15 j 00:23	0°♑	
asc. node	-3688 Sep 12 j 07:14	12°♐33'59			-3682 Jan 24 j 20:35	0°♒	
retrograde	-3688 Oct 20 j 00:53	20°♑08'32		evening set	-3682 Feb 22 j 22:27	20°♒34'56	
opposition	-3688 Nov 29 j 00:17	10°♒24'54	2°43'53		-3682 Mar 08 j 13:13	0°♓	
greatest brilliancy	-3688 Nov 28 j 21:37	10°♒27'35	-1.3m				
min. Earth dist.	-3688 Nov 28 j 16:08	10°♒33'04	0.67082 AU	conjunction	-3682 Apr 17 j 15:10	27°♓00'17	0°-10'-6
direct	-3687 Jan 08 j 11:04	0°♓39'39		minimum elong	-3682 Apr 17 j 15:38	27°♓01'03	0°10'08
	-3687 Apr 05 j 09:22	0°♐		behind sun begin	-3682 Apr 16 j 23:00	26°♓33'33	
	-3687 May 27 j 02:10	0°♑		behind sun end	-3682 Apr 18 j 08:16	27°♓28'33	
	-3687 Jul 11 j 20:16	0°♒			-3682 Apr 22 j 03:58	0°♓	
	-3687 Aug 23 j 01:21	0°♓		asc. node	-3682 May 05 j 03:42	8°♓31'19	
desc. node	-3687 Sep 18 j 14:08	19°♓49'17		max. Earth dist.	-3682 May 06 j 16:53	9°♓31'59	2.62149 AU
	-3687 Oct 01 j 21:50	0°♐		morning rise	-3682 Jun 06 j 08:45	29°♓20'31	
evening set	-3687 Oct 18 j 21:07	13°♐08'36			-3682 Jun 07 j 09:25	0°♑	
	-3687 Nov 09 j 09:31	0°♑			-3682 Jul 24 j 18:07	0°♒	
	-3687 Dec 17 j 11:39	0°♓			-3682 Sep 11 j 01:35	0°♑	
					-3682 Oct 31 j 01:37	0°♒	
conjunction	-3687 Dec 22 j 11:53	3°♓55'44	0°-57'-26		-3682 Dec 25 j 16:35	0°♓	
minimum elong	-3687 Dec 22 j 08:55	3°♓49'57	0°57'34	retrograde	-3681 Mar 01 j 08:42	19°♓09'06	
	-3686 Jan 25 j 02:25	0°♋		opposition	-3681 Apr 03 j 03:52	13°♓00'12	2°22'52
max. Earth dist.	-3686 Feb 03 j 14:34	7°♋15'05	2.39424 AU	greatest brilliancy	-3681 Apr 04 j 07:36	12°♓38'07	-2.4m
morning rise	-3686 Feb 28 j 03:03	25°♋37'48		min. Earth dist.	-3681 Apr 11 j 04:50	10°♓27'17	0.44294 AU
	-3686 Mar 06 j 01:23	0°♌		direct	-3681 May 09 j 00:04	5°♓34'51	
	-3686 Apr 17 j 00:30	0°♍		desc. node	-3681 May 11 j 11:37	5°♓37'27	
	-3686 May 31 j 12:08	0°♎			-3681 Jul 16 j 08:33	0°♐	
	-3686 Jul 18 j 05:16	0°♏			-3681 Aug 31 j 05:57	0°♑	
asc. node	-3686 Jul 31 j 07:32	7°♏46'17			-3681 Oct 12 j 04:15	0°♒	
	-3686 Sep 09 j 20:40	0°♐			-3681 Nov 22 j 16:11	0°♑	
retrograde	-3686 Nov 24 j 15:01	23°♐51'42			-3680 Jan 04 j 01:56	0°♒	
opposition	-3685 Jan 02 j 13:22	14°♐47'12	4°31'58		-3680 Feb 16 j 23:39	0°♓	
greatest brilliancy	-3685 Jan 03 j 04:31	14°♐32'19	-1.3m	asc. node	-3680 Mar 22 j 00:34	22°♓33'05	
min. Earth dist.	-3685 Jan 06 j 01:03	13°♐25'01	0.65220 AU		-3680 Apr 02 j 10:26	0°♓	
direct	-3685 Feb 12 j 19:02	4°♐46'17		evening set	-3680 Apr 08 j 22:33	4°♓13'29	
	-3685 Apr 30 j 15:10	0°♑			-3680 May 19 j 00:21	0°♑	
	-3685 Jun 19 j 18:36	0°♒					
	-3685 Aug 02 j 07:21	0°♓		conjunction	-3680 May 27 j 13:54	5°♓28'21	0°35'49
desc. node	-3685 Aug 06 j 12:46	3°♓03'34		minimum elong	-3680 May 27 j 12:44	5°♓26'30	0°35'53
	-3685 Sep 11 j 14:42	0°♐		max. Earth dist.	-3680 May 30 j 10:35	7°♓17'58	2.66811 AU
	-3685 Oct 20 j 06:45	0°♑			-3680 Jul 05 j 00:47	0°♒	
	-3685 Nov 27 j 12:17	0°♓		morning rise	-3680 Jul 12 j 13:02	4°♐47'37	
evening set	-3685 Dec 26 j 18:44	22°♓42'18			-3680 Aug 20 j 20:49	0°♑	
	-3684 Jan 05 j 07:39	0°♋			-3680 Oct 06 j 05:34	0°♒	
	-3684 Feb 14 j 12:17	0°♌			-3680 Nov 21 j 06:59	0°♓	
					-3679 Jan 06 j 17:28	0°♐	
conjunction	-3684 Feb 27 j 01:12	9°♌05'07	0°-56'-51		-3679 Feb 24 j 13:45	0°♑	
minimum elong	-3684 Feb 27 j 03:25	9°♌09'06	0°56'57	desc. node	-3679 Mar 28 j 13:36	16°♓59'16	
	-3684 Mar 27 j 15:27	0°♍			-3679 May 07 j 22:47	0°♓	
max. Earth dist.	-3684 Apr 05 j 22:03	6°♍24'19	2.52309 AU	retrograde	-3679 May 17 j 13:29	0°♓36'42	
morning rise	-3684 Apr 24 j 15:19	19°♍07'50			-3679 May 27 j 05:56	30°♓	
	-3684 May 10 j 22:30	0°♎		min. Earth dist.	-3679 Jun 15 j 04:11	25°♓57'44	0.37818 AU
asc. node	-3684 Jun 17 j 05:59	24°♎12'41		opposition	-3679 Jun 17 j 13:02	25°♓19'17	-5°-24'-35
	-3684 Jun 26 j 09:06	0°♏		greatest brilliancy	-3679 Jun 16 j 21:43	25°♓29'39	-2.9m
	-3684 Aug 14 j 03:15	0°♐		direct	-3679 Jul 17 j 09:05	20°♓20'05	
	-3684 Oct 05 j 22:28	0°♑			-3679 Aug 27 j 13:02	0°♓	
	-3684 Dec 22 j 01:42	0°♒			-3679 Oct 22 j 18:43	0°♑	
retrograde	-3683 Jan 04 j 00:08	0°♒58'59			-3679 Dec 09 j 18:21	0°♒	
	-3683 Jan 16 j 10:57	30°♒			-3678 Jan 25 j 17:29	0°♓	
opposition	-3683 Feb 09 j 17:47	23°♒00'30	5°01'35	asc. node	-3678 Feb 06 j 21:40	7°♓45'19	
greatest brilliancy	-3683 Feb 11 j 09:22	22°♒23'38	-1.7m		-3678 Mar 13 j 23:33	0°♓	
min. Earth dist.	-3683 Feb 16 j 21:25	20°♒21'19	0.57008 AU		-3678 Apr 30 j 12:35	0°♑	
direct	-3683 Mar 21 j 23:15	13°♒27'49		evening set	-3678 May 18 j 14:21	11°♓25'36	
	-3683 May 17 j 20:05	0°♒			-3678 Jun 16 j 19:06	0°♐	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 23

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

max. Earth dist.	-3678 Jun 23 j 07:28	4°II10'18	2.66023 AU			-3673 Jul 03 j 00:31	0°Υ		
						-3673 Sep 01 j 16:22	0°Ϣ		
conjunction	-3678 Jul 04 j 04:43	11°II10'23	1°05'10	asc. node		-3673 Sep 29 j 22:11	6°Ϣ42'07		
minimum elong	-3678 Jul 04 j 03:47	11°II08'53	1°05'18	retrograde		-3673 Oct 07 j 14:36	7°Ϣ04'47		
	-3678 Aug 02 j 03:29	0°Ϣ				-3673 Nov 09 j 15:58	30°ϢΥ		
morning rise	-3678 Aug 18 j 11:07	10°Ϣ46'03		min. Earth dist.		-3673 Nov 14 j 21:22	27°Υ55'54	0.66075 AU	
	-3678 Sep 16 j 03:30	0°Ω		opposition		-3673 Nov 16 j 16:59	27°Υ12'04	1°46'40	
	-3678 Oct 29 j 17:08	0°ϣ		greatest brilliancy		-3673 Nov 16 j 12:03	27°Υ17'02	-1.3m	
	-3678 Dec 11 j 01:00	0°♁		direct		-3673 Dec 26 j 11:23	17°Υ40'38		
	-3677 Jan 21 j 12:42	0°♌				-3672 Feb 15 j 18:16	0°Ϣ		
desc. node	-3677 Feb 13 j 13:41	16°♌44'10				-3672 Apr 15 j 14:46	0°II		
	-3677 Mar 03 j 22:49	0°♈				-3672 Jun 04 j 06:05	0°Ϣ		
	-3677 Apr 16 j 01:51	0°♈				-3672 Jul 19 j 10:10	0°Ω		
	-3677 Jun 06 j 12:13	0°♊				-3672 Aug 30 j 11:50	0°ϣ		
retrograde	-3677 Jul 20 j 09:41	11°♊37'09		evening set		-3672 Sep 24 j 16:47	18°ϣ48'53		
min. Earth dist.	-3677 Aug 18 j 02:21	5°♊59'55	0.47439 AU	desc. node		-3672 Oct 05 j 07:50	26°ϣ54'25		
greatest brilliancy	-3677 Aug 24 j 06:25	3°♊48'38	-2.2m			-3672 Oct 09 j 08:40	0°♁		
opposition	-3677 Aug 26 j 03:09	3°♊08'41	-5°-12'-18	max. Earth dist.		-3672 Nov 08 j 02:38	23°♁05'58	2.37895 AU	
	-3677 Sep 04 j 14:10	30°Ϣ♈				-3672 Nov 16 j 21:45	0°♌		
direct	-3677 Sep 28 j 05:05	26°♈16'20							
	-3677 Oct 23 j 11:21	0°♊		conjunction		-3672 Nov 24 j 17:32	6°♌09'16	0°-34'-32	
asc. node	-3677 Dec 25 j 21:13	27°♊50'14		minimum elong		-3672 Nov 24 j 14:51	6°♌03'58	0°34'35	
	-3677 Dec 29 j 21:18	0°♈				-3672 Dec 25 j 00:48	0°♈		
	-3676 Feb 20 j 08:45	0°Υ		morning rise		-3671 Jan 31 j 16:34	29°♈16'05		
	-3676 Apr 10 j 03:48	0°Ϣ				-3671 Feb 01 j 15:29	0°♈		
	-3676 May 28 j 08:38	0°II				-3671 Mar 13 j 13:51	0°♊		
evening set	-3676 Jun 24 j 22:41	17°II39'56				-3671 Apr 24 j 13:31	0°♈		
	-3676 Jul 13 j 19:32	0°Ϣ				-3671 Jun 08 j 07:51	0°Υ		
max. Earth dist.	-3676 Jul 17 j 21:40	2°Ϣ42'10	2.59961 AU			-3671 Jul 27 j 04:05	0°Ϣ		
				asc. node		-3671 Aug 16 j 22:17	11°Ϣ34'47		
conjunction	-3676 Aug 11 j 04:42	18°Ϣ59'19	1°08'42			-3671 Sep 24 j 15:01	0°II		
minimum elong	-3676 Aug 11 j 05:24	19°Ϣ00'30	1°08'50	retrograde		-3671 Nov 10 j 10:23	10°II48'13		
	-3676 Aug 27 j 06:46	0°Ω		opposition		-3671 Dec 19 j 21:53	1°II25'44	3°57'13	
morning rise	-3676 Sep 28 j 06:57	22°Ω28'16		greatest brilliancy		-3671 Dec 20 j 04:28	1°II19'12	-1.3m	
	-3676 Oct 08 j 18:46	0°ϣ		min. Earth dist.		-3671 Dec 21 j 21:34	0°II38'24	0.66719 AU	
	-3676 Nov 18 j 14:53	0°♁				-3671 Dec 23 j 12:26	30°ϢϢ		
	-3676 Dec 28 j 07:23	0°♌		direct		-3670 Jan 30 j 00:40	21°Ϣ27'14		
desc. node	-3676 Dec 31 j 12:30	2°♌27'10				-3670 Mar 12 j 02:41	0°II		
	-3675 Feb 05 j 12:51	0°♈				-3670 May 11 j 22:33	0°Ϣ		
	-3675 Mar 17 j 05:47	0°♈				-3670 Jun 28 j 14:24	0°Ω		
	-3675 Apr 27 j 18:48	0°♊				-3670 Aug 10 j 10:11	0°ϣ		
	-3675 Jun 12 j 22:57	0°♈		desc. node		-3670 Aug 23 j 05:38	9°ϣ25'18		
retrograde	-3675 Sep 01 j 08:33	29°♈53'11				-3670 Sep 19 j 11:18	0°♁		
min. Earth dist.	-3675 Oct 05 j 09:11	22°♈12'08	0.59222 AU			-3670 Oct 28 j 00:25	0°♌		
opposition	-3675 Oct 10 j 20:59	20°♈01'54	-1°-20'-31	evening set		-3670 Nov 29 j 20:32	25°♌50'48		
greatest brilliancy	-3675 Oct 10 j 12:05	20°♈10'41	-1.6m	greatest brilliancy		-3670 Dec 01 j 09:58	27°♌04'19	1.2m	
asc. node	-3675 Nov 11 j 21:52	11°♈37'19				-3670 Dec 05 j 03:30	0°♈		
direct	-3675 Nov 16 j 23:37	11°♈27'21				-3669 Jan 12 j 19:55	0°♈		
	-3674 Jan 21 j 00:01	0°Υ							
	-3674 Mar 19 j 06:50	0°Ϣ		conjunction		-3669 Feb 02 j 23:21	15°♈59'53	-1°-6'-35	
	-3674 May 08 j 21:31	0°II		minimum elong		-3669 Feb 03 j 00:19	16°♈01'41	1°06'45	
	-3674 Jun 25 j 03:31	0°Ϣ				-3669 Feb 21 j 21:08	0°♊		
evening set	-3674 Aug 05 j 12:58	27°Ϣ51'46		max. Earth dist.		-3669 Mar 21 j 09:10	19°♊49'01	2.47301 AU	
	-3674 Aug 08 j 14:59	0°Ω				-3669 Apr 04 j 21:07	0°♈		
max. Earth dist.	-3674 Aug 20 j 18:18	8°Ω29'51	2.49300 AU	morning rise		-3669 Apr 05 j 19:58	0°♈39'44		
	-3674 Sep 19 j 16:14	0°ϣ				-3669 May 19 j 03:39	0°Υ		
				asc. node		-3669 Jul 04 j 22:04	0°Ϣ01'32		
conjunction	-3674 Sep 26 j 02:42	4°ϣ43'40	0°35'13			-3669 Jul 04 j 21:05	0°Ϣ		
minimum elong	-3674 Sep 26 j 04:27	4°ϣ46'52	0°35'16			-3669 Aug 23 j 18:37	0°II		
	-3674 Oct 29 j 19:30	0°♁				-3669 Oct 20 j 07:00	0°Ϣ		
desc. node	-3674 Nov 18 j 10:39	15°♁03'34		retrograde		-3669 Dec 18 j 17:45	15°Ϣ55'09		
morning rise	-3674 Nov 21 j 20:07	17°♁40'58		opposition		-3668 Jan 25 j 12:17	7°Ϣ26'31	5°02'55	
	-3674 Dec 07 j 16:59	0°♌		greatest brilliancy		-3668 Jan 26 j 18:51	6°Ϣ57'15	-1.5m	
	-3673 Jan 15 j 03:33	0°♈		min. Earth dist.		-3668 Jan 31 j 07:25	5°Ϣ13'37	0.60966 AU	
	-3673 Feb 23 j 00:12	0°♈				-3668 Feb 16 j 07:35	30°ϢII		
	-3673 Apr 04 j 05:30	0°♊		direct		-3668 Mar 06 j 10:28	27°II34'49		
	-3673 May 16 j 22:05	0°♈				-3668 Mar 26 j 13:25	0°Ϣ		

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3668 Jun 01 j 16:07	0°♈		conjunction	-3663 Jun 19 j 16:01	27°♌29'09	0°56'20
desc. node	-3668 Jul 10 j 05:27	24°♈46'12		minimum elong	-3663 Jun 19 j 14:47	27°♌27'11	0°56'27
	-3668 Jul 17 j 18:59	0°♍			-3663 Jun 23 j 14:22	0°♍	
	-3668 Aug 28 j 00:21	0°♎		morning rise	-3663 Aug 03 j 20:31	26°♍36'09	
	-3668 Oct 06 j 03:32	0°♏			-3663 Aug 09 j 01:39	0°♐	
	-3668 Nov 13 j 17:03	0°♑			-3663 Sep 23 j 11:27	0°♑	
	-3668 Dec 22 j 19:56	0°♒			-3663 Nov 06 j 18:25	0°♒	
evening set	-3667 Feb 01 j 20:32	0°♓22'26			-3663 Dec 20 j 03:32	0°♓	
	-3667 Feb 01 j 08:09	0°♓			-3662 Feb 01 j 02:35	0°♓	
	-3667 Mar 15 j 17:47	0°♈		desc. node	-3662 Mar 02 j 06:31	20°♓09'20	
					-3662 Mar 16 j 20:33	0°♈	
conjunction	-3667 Mar 30 j 14:10	10°♈10'34	0°-29'-38		-3662 May 04 j 21:10	0°♐	
minimum elong	-3667 Mar 30 j 15:36	10°♈13'00	0°29'41	retrograde	-3662 Jun 28 j 21:27	17°♐09'27	
max. Earth dist.	-3667 Apr 25 j 23:46	27°♈53'55	2.58892 AU	min. Earth dist.	-3662 Jul 25 j 19:38	12°♐21'09	0.42597 AU
	-3667 Apr 29 j 03:57	0°♉		greatest brilliancy	-3662 Jul 31 j 09:09	10°♐34'26	-2.5m
morning rise	-3667 May 21 j 19:33	14°♉50'03		opposition	-3662 Aug 02 j 10:21	9°♐54'37	-6°-21'-26
asc. node	-3667 May 21 j 19:13	14°♉49'30		direct	-3662 Sep 02 j 20:00	3°♐55'55	
	-3667 Jun 14 j 09:08	0°♊			-3662 Nov 18 j 14:44	0°♑	
	-3667 Aug 01 j 02:18	0°♋			-3661 Jan 10 j 07:34	0°♒	
	-3667 Sep 19 j 12:40	0°♌		asc. node	-3661 Jan 11 j 13:04	0°♒43'53	
	-3667 Nov 11 j 20:57	0°♍			-3661 Feb 28 j 22:09	0°♓	
retrograde	-3666 Feb 04 j 16:50	28°♍26'10			-3661 Apr 18 j 14:02	0°♈	
opposition	-3666 Mar 11 j 06:41	21°♍28'26	4°01'27		-3661 Jun 05 j 07:44	0°♉	
greatest brilliancy	-3666 Mar 13 j 01:37	20°♍51'22	-2.1m	evening set	-3661 Jun 10 j 21:48	3°♉33'41	
min. Earth dist.	-3666 Mar 19 j 18:53	18°♍33'02	0.49497 AU	max. Earth dist.	-3661 Jul 08 j 11:47	21°♉21'18	2.62937 AU
direct	-3666 Apr 18 j 10:38	12°♍56'11			-3661 Jul 21 j 16:25	0°♐	
desc. node	-3666 May 28 j 05:12	22°♍16'12					
	-3666 Jun 13 j 11:40	0°♑		conjunction	-3661 Jul 27 j 13:35	3°♐53'11	1°11'02
	-3666 Aug 01 j 03:38	0°♒		minimum elong	-3661 Jul 27 j 13:32	3°♐53'06	1°11'11
	-3666 Sep 12 j 00:09	0°♓			-3661 Sep 04 j 07:24	0°♑	
	-3666 Oct 22 j 04:45	0°♈		morning rise	-3661 Sep 12 j 00:58	5°♑19'29	
	-3666 Dec 01 j 13:58	0°♉			-3661 Oct 17 j 03:42	0°♒	
	-3665 Jan 12 j 04:03	0°♊			-3661 Nov 27 j 10:55	0°♓	
	-3665 Feb 24 j 10:57	0°♋			-3660 Jan 06 j 16:01	0°♌	
evening set	-3665 Mar 24 j 03:40	18°♋34'39		desc. node	-3660 Jan 18 j 06:08	8°♌44'01	
asc. node	-3665 Apr 08 j 16:04	28°♋48'31			-3660 Feb 15 j 10:58	0°♈	
	-3665 Apr 10 j 11:41	0°♉			-3660 Mar 26 j 20:56	0°♉	
					-3660 May 08 j 19:28	0°♊	
conjunction	-3665 May 13 j 08:44	21°♉20'14	0°19'29		-3660 Jun 29 j 07:56	0°♋	
minimum elong	-3665 May 13 j 07:59	21°♉19'02	0°19'31	retrograde	-3660 Aug 16 j 15:32	13°♋13'03	
max. Earth dist.	-3665 May 22 j 03:57	26°♉59'37	2.65628 AU	min. Earth dist.	-3660 Sep 17 j 16:05	6°♋16'32	0.55040 AU
	-3665 May 26 j 20:31	0°♌		opposition	-3660 Sep 24 j 11:05	3°♋39'23	-2°-48'-17
morning rise	-3665 Jun 29 j 09:57	21°♌24'39		greatest brilliancy	-3660 Sep 23 j 13:00	4°♋00'42	-1.8m
	-3665 Jul 12 j 22:11	0°♍			-3660 Oct 04 j 13:20	30°♌	
	-3665 Aug 29 j 04:04	0°♎		direct	-3660 Oct 30 j 03:59	25°♌38'08	
	-3665 Oct 15 j 12:04	0°♏			-3660 Nov 27 j 02:36	0°♍	
	-3665 Dec 02 j 13:25	0°♐		asc. node	-3660 Nov 28 j 12:40	0°♍24'46	
	-3664 Jan 22 j 13:26	0°♑			-3659 Feb 02 j 23:40	0°♎	
	-3664 Apr 13 j 16:45	0°♒			-3659 Mar 27 j 23:56	0°♈	
desc. node	-3664 Apr 14 j 05:16	0°♒00'46			-3659 May 16 j 09:23	0°♉	
retrograde	-3664 Apr 15 j 21:58	0°♒01'50			-3659 Jul 02 j 05:45	0°♐	
	-3664 Apr 18 j 03:01	30°♒		evening set	-3659 Jul 19 j 15:16	11°♐33'30	
opposition	-3664 May 16 j 09:47	24°♒56'56	-2°-20'-33	max. Earth dist.	-3659 Aug 05 j 22:19	23°♐17'20	2.53912 AU
greatest brilliancy	-3664 May 16 j 17:23	24°♒51'48	-2.8m		-3659 Aug 15 j 15:56	0°♑	
min. Earth dist.	-3664 May 19 j 13:01	24°♒06'05	0.38383 AU				
direct	-3664 Jun 16 j 16:17	19°♒30'48		conjunction	-3659 Sep 06 j 23:01	15°♒40'17	0°53'20
	-3664 Jul 28 j 23:28	0°♓		minimum elong	-3659 Sep 07 j 00:43	15°♒43'19	0°53'24
	-3664 Sep 20 j 11:03	0°♈			-3659 Sep 26 j 20:27	0°♉	
	-3664 Nov 05 j 01:26	0°♉		morning rise	-3659 Oct 29 j 10:42	24°♉08'17	
	-3664 Dec 19 j 18:03	0°♊			-3659 Nov 06 j 05:10	0°♋	
	-3663 Feb 03 j 02:02	0°♋		desc. node	-3659 Dec 05 j 03:46	22°♋07'05	
asc. node	-3663 Feb 23 j 14:16	13°♋21'09			-3659 Dec 15 j 08:47	0°♌	
	-3663 Mar 21 j 10:22	0°♉			-3658 Jan 23 j 01:06	0°♈	
evening set	-3663 May 03 j 13:50	27°♉30'46			-3658 Mar 03 j 03:02	0°♉	
	-3663 May 07 j 11:48	0°♊			-3658 Apr 12 j 15:31	0°♋	
max. Earth dist.	-3663 Jun 14 j 02:41	23°♊56'14	2.66970 AU		-3658 May 26 j 00:53	0°♌	
					-3658 Jul 14 j 16:32	0°♍	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 25

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

retrograde	-3658 Sep 23 j 23:17	23°Υ30'45		-3653 Oct 15 j 07:19	0°ℳ	
asc. node	-3658 Oct 16 j 13:19	20°Υ01'19		-3653 Nov 22 j 15:08	0°✎	
min. Earth dist.	-3658 Oct 30 j 17:36	14°Υ52'31	0.64104 AU	-3653 Dec 31 j 12:15	0°☾	
opposition	-3658 Nov 03 j 00:24	13°Υ33'28	0°41'02	evening set	-3652 Jan 10 j 04:20	7°☾19'07
greatest brilliancy	-3658 Nov 02 j 21:08	13°Υ36'45	-1.4m		-3652 Feb 09 j 18:33	0°≈
direct	-3658 Dec 11 j 21:43	4°Υ20'15				
	-3657 Mar 02 j 04:24	0°♄		conjunction	-3652 Mar 10 j 11:41	21°≈17'21 0°-48'00
	-3657 Apr 25 j 13:34	0°♅		minimum elong	-3652 Mar 10 j 13:52	21°≈21'12 0°48'05
	-3657 Jun 12 j 23:36	0°☾			-3652 Mar 22 j 22:43	0°✎
	-3657 Jul 27 j 19:01	0°♁		max. Earth dist.	-3652 Apr 13 j 18:54	14°✎58'25 2.54826 AU
evening set	-3657 Sep 04 j 02:04	27°♁16'11		morning rise	-3652 May 04 j 23:27	29°✎10'15
	-3657 Sep 07 j 19:30	0°♊			-3652 May 06 j 05:29	0°Υ
max. Earth dist.	-3657 Sep 23 j 15:37	11°♊44'36	2.41649 AU	asc. node	-3652 Jun 07 j 11:32	21°Υ01'54
	-3657 Oct 17 j 17:53	0°♋			-3652 Jun 21 j 12:26	0°♄
desc. node	-3657 Oct 23 j 02:10	4°♋06'16			-3652 Aug 08 j 18:49	0°♅
					-3652 Sep 28 j 23:29	0°☾
conjunction	-3657 Oct 30 j 22:38	10°♋09'56	0°-5'-35		-3652 Nov 28 j 20:42	0°♁
minimum elong	-3657 Oct 30 j 22:13	10°♋09'08	0°05'37	retrograde	-3651 Jan 14 j 16:45	10°♁38'15
behind sun begin	-3657 Oct 29 j 21:49	9°♋21'56		opposition	-3651 Feb 19 j 18:23	2°♁59'15 4°49'22
behind sun end	-3657 Oct 31 j 22:37	10°♋56'21		greatest brilliancy	-3651 Feb 21 j 13:28	2°♁20'00 -1.8m
	-3657 Nov 25 j 09:17	0°ℳ		min. Earth dist.	-3651 Feb 27 j 13:58	0°♁09'06 0.54496 AU
	-3656 Jan 02 j 14:12	0°✎			-3651 Feb 28 j 00:14	30°☾
morning rise	-3656 Jan 03 j 15:08	0°✎48'52		direct	-3651 Mar 31 j 10:46	23°☾42'46
	-3656 Feb 10 j 05:52	0°☾			-3651 May 03 j 01:43	0°♁
	-3656 Mar 21 j 05:08	0°≈		desc. node	-3651 Jun 13 j 21:22	20°♁14'03
	-3656 May 02 j 07:56	0°✎			-3651 Jun 29 j 20:58	0°♊
	-3656 Jun 16 j 14:35	0°Υ			-3651 Aug 12 j 15:09	0°♋
	-3656 Aug 06 j 10:54	0°♄			-3651 Sep 21 j 21:20	0°ℳ
asc. node	-3656 Sep 02 j 13:25	13°♄25'12			-3651 Oct 31 j 04:29	0°✎
retrograde	-3656 Oct 27 j 18:34	27°♄57'54			-3651 Dec 09 j 21:43	0°☾
opposition	-3656 Dec 06 j 15:01	18°♄20'59	3°13'16		-3650 Jan 19 j 22:42	0°≈
greatest brilliancy	-3656 Dec 06 j 14:58	18°♄21'02	-1.3m		-3650 Mar 03 j 19:01	0°✎
min. Earth dist.	-3656 Dec 07 j 02:52	18°♄09'08	0.67240 AU	evening set	-3650 Mar 06 j 00:07	1°✎30'48
direct	-3655 Jan 16 j 09:02	8°♄29'50			-3650 Apr 17 j 12:12	0°Υ
	-3655 Mar 28 j 15:10	0°♅		asc. node	-3650 Apr 25 j 08:54	5°Υ09'48
	-3655 May 21 j 10:51	0°☾				
	-3655 Jul 06 j 19:01	0°♁		conjunction	-3650 Apr 27 j 07:19	6°Υ25'45 0°01'08
	-3655 Aug 18 j 05:20	0°♊		minimum elong	-3650 Apr 27 j 07:13	6°Υ25'36 0°01'08
desc. node	-3655 Sep 09 j 00:25	16°♊11'45		behind sun begin	-3650 Apr 26 j 10:31	5°Υ51'45
	-3655 Sep 27 j 03:33	0°♋		behind sun end	-3650 Apr 28 j 03:55	6°Υ59'25
evening set	-3655 Nov 02 j 13:07	28°♋20'35		max. Earth dist.	-3650 May 12 j 14:17	16°Υ22'46 2.63612 AU
	-3655 Nov 04 j 15:41	0°ℳ			-3650 Jun 02 j 17:43	0°♄
	-3655 Dec 12 j 17:42	0°✎		morning rise	-3650 Jun 14 j 22:27	7°♄47'46
					-3650 Jul 19 j 22:47	0°♅
conjunction	-3654 Jan 07 j 05:47	19°✎54'26	-1°-4'-48		-3650 Sep 05 j 18:54	0°☾
minimum elong	-3654 Jan 07 j 04:04	19°✎51'06	1°04'57		-3650 Oct 24 j 13:49	0°♁
	-3654 Jan 20 j 08:07	0°☾			-3650 Dec 15 j 06:10	0°♊
max. Earth dist.	-3654 Feb 25 j 11:50	27°☾12'44	2.42026 AU		-3649 Feb 22 j 08:43	0°♋
	-3654 Mar 01 j 06:44	0°≈		retrograde	-3649 Mar 16 j 22:22	2°♋55'08
morning rise	-3654 Mar 14 j 07:22	9°≈29'40			-3649 Apr 07 j 23:10	30°☾
	-3654 Apr 12 j 04:41	0°✎		opposition	-3649 Apr 17 j 20:26	27°♊13'16 0°56'59
	-3654 May 26 j 12:37	0°Υ		greatest brilliancy	-3649 Apr 18 j 07:04	27°♊05'16 -2.6m
	-3654 Jul 12 j 17:46	0°♄		min. Earth dist.	-3649 Apr 24 j 19:51	25°♊08'05 0.41728 AU
asc. node	-3654 Jul 21 j 12:23	5°♄19'53		desc. node	-3649 May 01 j 22:08	23°♊12'33
	-3654 Sep 02 j 12:32	0°♅		direct	-3649 May 22 j 01:02	20°♊32'11
	-3654 Nov 14 j 11:02	0°☾			-3649 Jun 30 j 13:17	0°♋
retrograde	-3654 Dec 03 j 02:18	1°☾59'05			-3649 Aug 22 j 11:29	0°ℳ
	-3654 Dec 20 j 15:51	30°☾			-3649 Oct 05 j 06:16	0°✎
opposition	-3653 Jan 10 j 16:22	23°♅06'09	4°46'58		-3649 Nov 16 j 16:34	0°☾
greatest brilliancy	-3653 Jan 11 j 12:54	22°♅46'07	-1.4m		-3649 Dec 29 j 16:22	0°≈
min. Earth dist.	-3653 Jan 15 j 00:18	21°♅24'58	0.63976 AU		-3648 Feb 11 j 23:20	0°✎
direct	-3653 Feb 20 j 21:48	13°♅06'24		asc. node	-3648 Mar 12 j 05:39	19°✎18'20
	-3653 Apr 21 j 16:20	0°☾			-3648 Mar 28 j 16:11	0°Υ
	-3653 Jun 13 j 15:38	0°♁		evening set	-3648 Apr 18 j 02:36	13°Υ10'49
desc. node	-3653 Jul 27 j 22:19	0°♊00'58			-3648 May 14 j 09:14	0°♄
	-3653 Jul 27 j 21:47	0°♊				
	-3653 Sep 06 j 11:48	0°♋		conjunction	-3648 Jun 05 j 01:57	13°♄50'11 0°44'13

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 26

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

minimum elong	-3648 Jun 05 j 00:41	13° U 48'10	0°44'17				-3643 Oct 17 j 15:37	30° R H	
max. Earth dist.	-3648 Jun 04 j 19:38	13° U 40'07	2.67097 AU	opposition	-3643 Oct 19 j 15:16	29° H 12'28	0°-33'-11		
	-3648 Jun 30 j 09:57	0° II		greatest brilliancy	-3643 Oct 19 j 12:03	29° H 15'41	-1.6m		
morning rise	-3648 Jul 20 j 15:37	12° II 57'31		asc. node	-3643 Nov 02 j 03:04	24° H 15'45			
	-3648 Aug 16 j 02:11	0° S		direct	-3643 Nov 26 j 10:54	20° H 22'20			
	-3648 Oct 01 j 01:20	0° Q			-3642 Jan 09 j 13:56	0° Y			
	-3648 Nov 15 j 08:34	0° M			-3642 Mar 13 j 00:38	0° B			
	-3648 Dec 30 j 09:04	0° A			-3642 May 03 j 17:18	0° II			
	-3647 Feb 14 j 03:08	0° M			-3642 Jun 20 j 08:35	0° S			
desc. node	-3647 Mar 18 j 22:24	20° M 13'39			-3642 Aug 03 j 23:04	0° Q			
	-3647 Apr 05 j 11:28	0° X		evening set	-3642 Aug 15 j 18:21	8° Q 15'07			
retrograde	-3647 Jun 03 j 03:51	18° X 27'31		max. Earth dist.	-3642 Aug 30 j 20:26	18° Q 59'32	2.46586 AU		
min. Earth dist.	-3647 Jun 30 j 03:58	14° X 01'29	0.38898 AU		-3642 Sep 15 j 00:33	0° M			
greatest brilliancy	-3647 Jul 03 j 19:17	12° X 59'50	-2.8m						
opposition	-3647 Jul 05 j 04:24	12° X 36'21	-6°-19'-48	conjunction	-3642 Oct 07 j 22:41	17° M 00'31	0°21'54		
direct	-3647 Aug 04 j 02:42	7° X 25'26		minimum elong	-3642 Oct 08 j 00:00	17° M 02'59	0°21'56		
	-3647 Oct 11 j 21:11	0° Z			-3642 Oct 25 j 02:25	0° A			
	-3647 Dec 02 j 15:47	0° \approx		desc. node	-3642 Nov 08 j 19:55	11° A 18'09			
	-3646 Jan 19 j 23:52	0° H			-3642 Dec 02 j 21:50	0° M			
asc. node	-3646 Jan 28 j 04:19	5° H 07'29		morning rise	-3642 Dec 06 j 10:49	2° M 45'53			
	-3646 Mar 08 j 21:39	0° Y			-3641 Jan 10 j 06:15	0° X			
	-3646 Apr 25 j 18:36	0° B		greatest brilliancy	-3641 Jan 22 j 13:09	9° X 34'48	1.2m		
evening set	-3646 May 27 j 01:55	19° B 44'50			-3641 Feb 18 j 00:24	0° Z			
	-3646 Jun 12 j 04:42	0° II			-3641 Mar 30 j 02:09	0° \approx			
max. Earth dist.	-3646 Jun 28 j 19:17	10° II 39'01	2.65151 AU		-3641 May 11 j 11:12	0° H			
					-3641 Jun 26 j 15:03	0° Y			
conjunction	-3646 Jul 12 j 13:49	19° II 33'45	1°08'33		-3641 Aug 20 j 13:57	0° B			
minimum elong	-3646 Jul 12 j 13:09	19° II 32'40	1°08'41	asc. node	-3641 Sep 20 j 03:49	11° B 24'58			
	-3646 Jul 28 j 13:11	0° S		retrograde	-3641 Oct 15 j 08:11	15° B 04'24			
morning rise	-3646 Aug 27 j 02:46	19° S 39'00		min. Earth dist.	-3641 Nov 23 j 10:00	5° B 40'09	0.66757 AU		
	-3646 Sep 11 j 09:52	0° Q		opposition	-3641 Nov 24 j 09:45	5° B 16'19	2°21'03		
	-3646 Oct 24 j 16:51	0° M		greatest brilliancy	-3641 Nov 24 j 05:38	5° B 20'26	-1.3m		
	-3646 Dec 05 j 14:38	0° A			-3641 Dec 08 j 10:41	30° R Y			
	-3645 Jan 15 j 13:08	0° M		direct	-3640 Jan 03 j 14:05	25° Y 36'35			
desc. node	-3645 Feb 03 j 23:04	14° M 20'40			-3640 Feb 01 j 05:04	0° B			
	-3645 Feb 25 j 05:01	0° X			-3640 Apr 09 j 04:12	0° II			
	-3645 Apr 07 j 22:28	0° Z			-3640 May 29 j 23:39	0° S			
	-3645 May 24 j 04:33	0° \approx			-3640 Jul 14 j 12:52	0° Q			
retrograde	-3645 Jul 31 j 07:01	24° \approx 14'35			-3640 Aug 25 j 17:45	0° M			
min. Earth dist.	-3645 Aug 30 j 04:15	18° \approx 08'21	0.50256 AU	desc. node	-3640 Sep 25 j 17:16	23° M 10'57			
greatest brilliancy	-3645 Sep 05 j 09:43	15° \approx 50'38	-2.1m		-3640 Oct 04 j 15:06	0° A			
opposition	-3645 Sep 06 j 23:03	15° \approx 16'07	-4°-21'00	evening set	-3640 Oct 08 j 00:42	2° A 36'59			
direct	-3645 Oct 11 j 00:43	7° \approx 56'35			-3640 Nov 12 j 03:42	0° M			
asc. node	-3645 Dec 16 j 03:41	27° \approx 39'41							
	-3645 Dec 20 j 23:13	0° H		conjunction	-3640 Dec 10 j 05:48	22° M 07'30	0°-48'-48		
	-3644 Feb 14 j 07:40	0° Y		minimum elong	-3640 Dec 10 j 02:33	22° M 01'07	0°48'52		
	-3644 Apr 05 j 00:38	0° B			-3640 Dec 20 j 06:07	0° X			
	-3644 May 23 j 14:36	0° II		max. Earth dist.	-3639 Jan 03 j 02:46	10° X 51'28	2.37868 AU		
evening set	-3644 Jul 03 j 17:17	26° II 23'50			-3639 Jan 27 j 20:07	0° Z			
	-3644 Jul 09 j 04:57	0° S		morning rise	-3639 Feb 16 j 12:28	14° Z 57'20			
max. Earth dist.	-3644 Jul 24 j 10:26	10° S 06'44	2.58016 AU		-3639 Mar 08 j 17:43	0° \approx			
					-3639 Apr 19 j 15:34	0° H			
conjunction	-3644 Aug 20 j 12:16	28° S 30'24	1°04'51		-3639 Jun 03 j 03:54	0° Y			
minimum elong	-3644 Aug 20 j 13:23	28° S 32'20	1°04'58		-3639 Jul 21 j 04:45	0° B			
	-3644 Aug 22 j 16:11	0° Q		asc. node	-3639 Aug 07 j 04:39	9° B 52'48			
	-3644 Oct 04 j 01:57	0° M			-3639 Sep 14 j 11:41	0° II			
morning rise	-3644 Oct 08 j 20:50	3° M 28'19		retrograde	-3639 Nov 18 j 11:51	18° II 42'13			
	-3644 Nov 13 j 18:03	0° A		opposition	-3639 Dec 27 j 17:03	9° II 29'17	4°18'26		
desc. node	-3644 Dec 21 j 22:43	29° A 00'51		greatest brilliancy	-3639 Dec 28 j 04:14	9° II 18'15	-1.3m		
	-3644 Dec 23 j 05:34	0° M		min. Earth dist.	-3639 Dec 30 j 12:59	8° II 22'17	0.66019 AU		
	-3643 Jan 31 j 05:28	0° X			-3638 Jan 28 j 22:01	30° R B			
	-3643 Mar 11 j 15:08	0° Z		direct	-3638 Feb 06 j 22:35	29° B 28'45			
	-3643 Apr 21 j 15:37	0° \approx			-3638 Feb 16 j 05:25	0° II			
	-3643 Jun 05 j 08:20	0° H			-3638 May 05 j 00:40	0° S			
	-3643 Jul 31 j 14:34	0° Y			-3638 Jun 23 j 01:17	0° Q			
retrograde	-3643 Sep 09 j 20:38	9° Y 08'18			-3638 Aug 05 j 07:45	0° M			
min. Earth dist.	-3643 Oct 14 j 22:02	1° Y 05'14	0.61210 AU	desc. node	-3638 Aug 13 j 15:55	6° M 04'43			

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

evening set	-3638 Sep 14 j 13:03	0°♌				-3633 Jul 08 j 06:49	0°♊			
	-3638 Oct 23 j 04:00	0°♍				-3633 Aug 24 j 06:55	0°♉			
	-3638 Nov 30 j 08:10	0°♈				-3633 Oct 10 j 01:14	0°♏			
	-3638 Dec 15 j 04:35	11°♏35'52				-3633 Nov 25 j 21:06	0°♑			
	-3637 Jan 08 j 01:18	0°♊				-3632 Jan 12 j 20:14	0°♌			
conjunction	-3637 Feb 16 j 22:39	29°♊51'40	-1°-2'-5		desc. node	-3632 Apr 04 j 16:14	12°♍21'36			
	minimum elong	-3637 Feb 17 j 00:33	29°♊55'09	1°02'13		retrograde	-3632 May 03 j 22:01	17°♍24'08		
		-3637 Feb 17 j 03:12	0°♌			opposition	-3632 Jun 03 j 09:40	12°♍20'33	-4°-14'-20	
max. Earth dist.	-3637 Mar 31 j 08:15	0°♈08'08	2.50125 AU		greatest brilliancy	-3632 Jun 03 j 08:16	12°♍21'29	-2.9m		
	-3637 Mar 31 j 03:35	0°♈			min. Earth dist.	-3632 Jun 03 j 12:19	12°♍18'47	0.37655 AU		
morning rise	-3637 Apr 17 j 09:36	11°♈53'13			direct	-3632 Jul 03 j 15:29	7°♍17'26			
	-3637 May 14 j 08:50	0°♑				-3632 Sep 08 j 19:09	0°♏			
asc. node	-3637 Jun 25 j 03:14	27°♑01'05				-3632 Oct 28 j 08:39	0°♊			
	-3637 Jun 29 j 20:39	0°♉				-3632 Dec 13 j 13:52	0°♌			
	-3637 Aug 17 j 23:42	0°♊				-3631 Jan 28 j 17:04	0°♈			
	-3637 Oct 11 j 05:56	0°♉			asc. node	-3631 Feb 13 j 19:21	10°♈22'16			
retrograde	-3637 Dec 28 j 08:43	24°♉48'24				-3631 Mar 16 j 12:09	0°♑			
opposition	-3636 Feb 03 j 14:25	16°♉35'45	5°04'13			-3631 May 02 j 19:27	0°♉			
greatest brilliancy	-3636 Feb 05 j 02:16	16°♉01'56	-1.6m		evening set	-3631 May 12 j 05:44	5°♉58'18			
min. Earth dist.	-3636 Feb 10 j 04:35	14°♉06'59	0.58885 AU		max. Earth dist.	-3631 Jun 19 j 11:30	0°♊17'52	2.66558 AU		
direct	-3636 Mar 15 j 05:07	6°♉52'59				-3631 Jun 19 j 00:20	0°♊			
desc. node	-3636 May 24 j 05:40	0°♏								
	-3636 Jun 30 j 14:24	22°♏41'41			conjunction	-3631 Jun 27 j 23:48	5°♊45'10	1°01'53		
	-3636 Jul 11 j 12:07	0°♑			minimum elong	-3631 Jun 27 j 22:43	5°♊43'25	1°02'00		
	-3636 Aug 22 j 09:36	0°♌				-3631 Aug 04 j 10:20	0°♉			
	-3636 Sep 30 j 20:25	0°♍			morning rise	-3631 Aug 12 j 03:46	5°♉03'57			
evening set	-3636 Nov 08 j 14:59	0°♏				-3631 Sep 18 j 15:10	0°♏			
	-3636 Dec 17 j 21:38	0°♊				-3631 Nov 01 j 12:42	0°♑			
	-3635 Jan 27 j 12:56	0°♌				-3631 Dec 14 j 07:20	0°♌			
	-3635 Feb 14 j 02:15	12°♌33'41				-3630 Jan 25 j 08:54	0°♍			
	-3635 Mar 11 j 01:03	0°♈			desc. node	-3630 Feb 20 j 16:45	18°♍47'03			
conjunction	-3635 Apr 10 j 01:55	20°♈23'55	0°-18'-23			-3630 Mar 08 j 14:24	0°♏			
	minimum elong	-3635 Apr 10 j 02:48	20°♈25'23	0°18'24		-3630 Apr 22 j 08:14	0°♊			
		-3635 Apr 24 j 12:25	0°♑		retrograde	-3630 Jun 24 j 22:47	0°♌			
max. Earth dist.	-3635 May 02 j 09:22	5°♑11'08	2.60789 AU			-3630 Jul 11 j 11:25	1°♌54'35			
asc. node	-3635 May 12 j 00:56	11°♑29'58			min. Earth dist.	-3630 Jul 27 j 17:06	30°♌♊			
morning rise	-3635 May 30 j 20:19	23°♑40'49			greatest brilliancy	-3630 Aug 08 j 07:09	26°♊40'52	0.45188 AU		
	-3635 Jun 09 j 16:37	0°♉			opposition	-3630 Aug 14 j 07:24	24°♊38'02	-2.4m		
retrograde	-3635 Jul 27 j 04:02	0°♊			direct	-3630 Aug 16 j 08:02	23°♊56'16	-5°-47'-17		
	-3635 Sep 13 j 21:12	0°♉				-3630 Sep 17 j 14:55	17°♊27'38			
	-3635 Nov 04 j 00:36	0°♏				-3630 Nov 06 j 03:58	0°♌			
	-3634 Jan 03 j 17:59	0°♑			asc. node	-3629 Jan 01 j 18:25	29°♌07'05			
	-3634 Feb 18 j 04:12	10°♑11'08				-3629 Jan 03 j				

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 28

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

direct	-3628 Nov 09 j 13:51	5° K 17'51			-3622 Jan 15 j 13:22	0° Z	
asc. node	-3628 Nov 18 j 18:49	5° K 49'16					
	-3627 Jan 26 j 03:06	0° Y		conjunction	-3622 Jan 22 j 15:06	5° Z 24'01	-1°-7'-29
	-3627 Mar 22 j 07:47	0° B		minimum elong	-3622 Jan 22 j 15:00	5° Z 23'51	1°07'38
	-3627 May 11 j 10:00	0° II			-3622 Feb 24 j 12:18	0° \approx	
	-3627 Jun 27 j 12:50	0° S		max. Earth dist.	-3622 Mar 12 j 10:16	11° \approx 34'33	2.44941 AU
evening set	-3627 Jul 29 j 03:10	21° S 07'22		morning rise	-3622 Mar 27 j 10:53	22° \approx 18'03	
	-3627 Aug 11 j 00:59	0° Ω			-3622 Apr 07 j 10:04	0° K	
max. Earth dist.	-3627 Aug 13 j 23:29	2° Ω 02'27	2.51429 AU		-3622 May 21 j 15:24	0° Y	
					-3622 Jul 07 j 11:44	0° B	
conjunction	-3627 Sep 17 j 13:54	26° Ω 38'16	0°43'47	asc. node	-3622 Jul 11 j 19:10	2° B 39'58	
minimum elong	-3627 Sep 17 j 15:43	26° Ω 41'34	0°43'51		-3622 Aug 26 j 23:41	0° II	
	-3627 Sep 22 j 04:49	0° M			-3622 Oct 26 j 22:05	0° S	
	-3627 Nov 01 j 11:16	0° $\underline{\text{A}}$		retrograde	-3622 Dec 11 j 20:45	10° S 17'18	
morning rise	-3627 Nov 11 j 06:06	7° $\underline{\text{A}}$ 27'21		opposition	-3621 Jan 19 j 01:03	1° S 37'13	4°57'35
desc. node	-3627 Nov 25 j 13:45	18° $\underline{\text{A}}$ 27'14		greatest brilliancy	-3621 Jan 20 j 03:15	1° S 11'56	-1.4m
	-3627 Dec 10 j 11:41	0° M			-3621 Jan 23 j 05:48	30° R II	
	-3626 Jan 18 j 00:38	0° Z		min. Earth dist.	-3621 Jan 24 j 05:08	29° II 37'37	0.62436 AU
	-3626 Feb 25 j 22:48	0° Z		direct	-3621 Mar 01 j 03:55	21° II 40'40	
	-3626 Apr 07 j 05:35	0° \approx			-3621 Apr 09 j 14:49	0° S	
	-3626 May 20 j 02:32	0° K			-3621 Jun 07 j 00:25	0° Ω	
	-3626 Jul 06 j 22:18	0° Y		desc. node	-3621 Jul 18 j 08:10	27° Ω 14'11	
	-3626 Sep 14 j 15:10	0° B			-3621 Jul 22 j 06:43	0° M	
retrograde	-3626 Oct 01 j 20:55	1° B 49'40			-3621 Sep 01 j 05:39	0° $\underline{\text{A}}$	
asc. node	-3626 Oct 06 j 19:20	1° B 39'54			-3621 Oct 10 j 05:18	0° M	
	-3626 Oct 18 j 06:14	30° R Y			-3621 Nov 17 j 15:50	0° Z	
min. Earth dist.	-3626 Nov 08 j 12:11	22° Y 53'42	0.65313 AU		-3621 Dec 26 j 15:15	0° Z	
opposition	-3626 Nov 10 j 23:14	21° Y 54'23	1°20'20	evening set	-3620 Jan 23 j 22:33	21° Z 10'48	
greatest brilliancy	-3626 Nov 10 j 18:24	21° Y 59'15	-1.4m		-3620 Feb 04 j 23:32	0° \approx	
direct	-3626 Dec 20 j 08:48	12° Y 30'24			-3620 Mar 18 j 05:31	0° K	
	-3625 Feb 21 j 14:47	0° B					
	-3625 Apr 19 j 18:48	0° II		conjunction	-3620 Mar 22 j 05:18	2° K 45'37	0°-37'-41
	-3625 Jun 07 j 22:12	0° S		minimum elong	-3620 Mar 22 j 07:07	2° K 48'46	0°37'45
	-3625 Jul 22 j 23:53	0° Ω		max. Earth dist.	-3620 Apr 21 j 00:45	23° K 00'32	2.57179 AU
	-3625 Sep 03 j 02:23	0° M			-3620 May 01 j 12:48	0° Y	
evening set	-3625 Sep 16 j 00:30	9° M 33'33		morning rise	-3620 May 14 j 19:03	8° Y 43'42	
desc. node	-3625 Oct 13 j 11:20	0° $\underline{\text{A}}$ 20'05		asc. node	-3620 May 28 j 16:39	17° Y 46'27	
	-3625 Oct 13 j 00:51	0° $\underline{\text{A}}$			-3620 Jun 16 j 17:37	0° B	
max. Earth dist.	-3625 Oct 14 j 05:44	0° $\underline{\text{A}}$ 55'25	2.39292 AU		-3620 Aug 03 j 15:01	0° II	
					-3620 Sep 22 j 16:04	0° S	
conjunction	-3625 Nov 14 j 03:47	24° $\underline{\text{A}}$ 55'09	0°-22'-14		-3620 Nov 17 j 05:46	0° Ω	
minimum elong	-3625 Nov 14 j 02:00	24° $\underline{\text{A}}$ 51'40	0°22'17	retrograde	-3619 Jan 26 j 05:46	20° Ω 53'04	
	-3625 Nov 20 j 15:20	0° M		opposition	-3619 Mar 02 j 12:12	13° Ω 35'53	4°26'24
	-3625 Dec 28 j 19:09	0° Z		greatest brilliancy	-3619 Mar 04 j 08:25	12° Ω 56'39	-2.0m
morning rise	-3624 Jan 20 j 00:42	17° Z 21'50		min. Earth dist.	-3619 Mar 10 j 18:52	10° Ω 40'20	0.51797 AU
	-3624 Feb 05 j 09:35	0° Z		direct	-3619 Apr 10 j 10:39	4° Ω 41'01	
	-3624 Mar 16 j 07:03	0° \approx		desc. node	-3619 Jun 04 j 07:56	20° Ω 53'58	
	-3624 Apr 27 j 06:25	0° K			-3619 Jun 20 j 22:27	0° M	
	-3624 Jun 11 j 03:16	0° Y			-3619 Aug 05 j 21:46	0° $\underline{\text{A}}$	
	-3624 Jul 30 j 13:42	0° B			-3619 Sep 15 j 22:43	0° M	
asc. node	-3624 Aug 23 j 19:28	13° B 00'54			-3619 Oct 25 j 16:14	0° Z	
	-3624 Oct 02 j 19:04	0° II			-3619 Dec 04 j 16:49	0° Z	
retrograde	-3624 Nov 04 j 13:47	5° II 46'38			-3618 Jan 14 j 23:20	0° \approx	
	-3624 Dec 04 j 14:53	30° R B			-3618 Feb 27 j 00:05	0° K	
opposition	-3624 Dec 14 j 06:08	26° B 17'22	3°39'50	evening set	-3618 Mar 16 j 13:44	11° K 53'33	
greatest brilliancy	-3624 Dec 14 j 09:33	26° B 13'58	-1.3m		-3618 Apr 12 j 20:07	0° Y	
min. Earth dist.	-3624 Dec 15 j 14:14	25° B 45'25	0.67075 AU	asc. node	-3618 Apr 15 j 13:15	1° Y 46'54	
direct	-3623 Jan 24 j 05:55	16° B 21'28					
	-3623 Mar 19 j 04:52	0° II		conjunction	-3618 May 06 j 15:20	15° Y 31'24	0°12'00
	-3623 May 15 j 10:36	0° S		minimum elong	-3618 May 06 j 14:51	15° Y 30'36	0°12'02
	-3623 Jul 01 j 13:25	0° Ω		behind sun begin	-3618 May 06 j 01:28	15° Y 08'57	
	-3623 Aug 13 j 06:14	0° M		behind sun end	-3618 May 07 j 04:13	15° Y 52'15	
desc. node	-3623 Aug 30 j 08:45	12° M 37'52		max. Earth dist.	-3618 May 18 j 08:16	23° Y 04'54	2.64834 AU
	-3623 Sep 22 j 06:55	0° $\underline{\text{A}}$			-3618 May 29 j 02:42	0° B	
	-3623 Oct 30 j 19:54	0° M		morning rise	-3618 Jun 23 j 07:43	16° B 05'45	
evening set	-3623 Nov 17 j 21:13	14° M 13'05			-3618 Jul 15 j 05:18	0° II	
	-3623 Dec 07 j 22:27	0° Z			-3618 Aug 31 j 16:44	0° S	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 29

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3618 Oct 18 j 14:17	0°♈		asc. node	-3613 Dec 06 j 09:28	28°♊50'20	
	-3618 Dec 06 j 22:01	0°♏			-3613 Dec 09 j 07:27	0°♏	
	-3617 Jan 30 j 19:52	0°♊			-3612 Feb 07 j 19:22	0°♏	
retrograde	-3617 Apr 02 j 23:15	18°♊03'15			-3612 Mar 30 j 17:41	0°♏	
desc. node	-3617 Apr 22 j 07:50	15°♊47'26			-3612 May 18 j 18:55	0°♏	
opposition	-3617 May 03 j 23:21	12°♊45'39	0°-49'-49		-3612 Jul 04 j 13:27	0°♏	
greatest brilliancy	-3617 May 04 j 04:42	12°♊41'53	-2.8m	evening set	-3612 Jul 12 j 17:39	5°♏23'53	
min. Earth dist.	-3617 May 09 j 04:08	11°♊18'02	0.39603 AU	max. Earth dist.	-3612 Jul 31 j 09:51	17°♏55'18	2.55819 AU
direct	-3617 Jun 05 j 11:19	6°♊49'17			-3612 Aug 18 j 01:13	0°♏	
	-3617 Aug 11 j 01:30	0°♏					
	-3617 Sep 27 j 10:17	0°♏		conjunction	-3612 Aug 30 j 06:53	8°♏31'35	0°58'59
	-3617 Nov 10 j 07:15	0°♏		minimum elong	-3612 Aug 30 j 08:23	8°♏34'12	0°59'05
	-3617 Dec 24 j 02:11	0°♏			-3612 Sep 29 j 08:57	0°♏	
	-3616 Feb 06 j 21:04	0°♏		morning rise	-3612 Oct 20 j 05:40	15°♏18'00	
asc. node	-3616 Mar 02 j 11:21	16°♏07'54			-3612 Nov 08 j 21:44	0°♏	
	-3616 Mar 23 j 21:05	0°♏		desc. node	-3612 Dec 12 j 06:41	25°♏25'50	
evening set	-3616 Apr 27 j 01:39	21°♏54'45			-3612 Dec 18 j 05:08	0°♏	
	-3616 May 09 j 18:10	0°♏			-3611 Jan 26 j 00:39	0°♏	
max. Earth dist.	-3616 Jun 10 j 05:36	20°♏02'47	2.67135 AU		-3611 Mar 06 j 05:16	0°♏	
					-3611 Apr 15 j 20:58	0°♏	
conjunction	-3616 Jun 13 j 11:57	22°♏07'43	0°51'39		-3611 May 29 j 15:20	0°♏	
minimum elong	-3616 Jun 13 j 10:40	22°♏05'40	0°51'44		-3611 Jul 19 j 23:56	0°♏	
	-3616 Jun 25 j 19:49	0°♏		retrograde	-3611 Sep 18 j 01:31	17°♏56'18	
morning rise	-3616 Jul 28 j 19:02	21°♏11'00		asc. node	-3611 Oct 23 j 09:49	9°♏49'09	
	-3616 Aug 11 j 09:28	0°♏		min. Earth dist.	-3611 Oct 24 j 02:05	9°♏33'00	0.62920 AU
	-3616 Sep 26 j 01:26	0°♏		opposition	-3611 Oct 28 j 00:04	7°♏58'57	0°11'02
	-3616 Nov 09 j 18:37	0°♏		greatest brilliancy	-3611 Oct 27 j 22:59	8°♏00'02	-1.5m
	-3616 Dec 23 j 19:24	0°♏			-3611 Nov 22 j 13:51	30°♏	
	-3615 Feb 05 j 18:08	0°♏		direct	-3611 Dec 05 j 10:20	28°♏55'16	
desc. node	-3615 Mar 09 j 08:57	21°♏03'16			-3611 Dec 18 j 22:07	0°♏	
	-3615 Mar 23 j 08:58	0°♏			-3610 Mar 06 j 05:19	0°♏	
	-3615 May 19 j 22:51	0°♏			-3610 Apr 28 j 09:07	0°♏	
retrograde	-3615 Jun 18 j 07:12	5°♏32'03			-3610 Jun 15 j 11:55	0°♏	
min. Earth dist.	-3615 Jul 14 j 22:09	0°♏58'39	0.40714 AU		-3610 Jul 30 j 06:34	0°♏	
	-3615 Jul 18 j 04:11	30°♏		evening set	-3610 Aug 26 j 11:51	19°♏12'35	
greatest brilliancy	-3615 Jul 19 j 19:33	29°♏29'56	-2.6m		-3610 Sep 10 j 08:33	0°♏	
opposition	-3615 Jul 21 j 16:28	28°♏55'36	-6°-33'-41	max. Earth dist.	-3610 Sep 11 j 22:51	1°♏10'12	2.43811 AU
direct	-3615 Aug 21 j 08:54	23°♏20'38					
	-3615 Sep 24 j 08:57	0°♏		conjunction	-3610 Oct 20 j 14:55	0°♏10'45	0°06'47
	-3615 Nov 24 j 12:40	0°♏		minimum elong	-3610 Oct 20 j 15:24	0°♏11'39	0°06'47
	-3614 Jan 13 j 22:04	0°♏		behind sun begin	-3610 Oct 19 j 16:32	29°♏28'00	
asc. node	-3614 Jan 18 j 10:13	2°♏45'07		behind sun end	-3610 Oct 21 j 14:15	0°♏55'20	
	-3614 Mar 03 j 16:21	0°♏			-3610 Oct 20 j 09:18	0°♏	
	-3614 Apr 20 j 23:16	0°♏		desc. node	-3610 Oct 30 j 05:04	7°♏32'26	
evening set	-3614 Jun 04 j 14:16	28°♏06'14			-3610 Nov 28 j 02:41	0°♏	
	-3614 Jun 07 j 13:46	0°♏		morning rise	-3610 Dec 22 j 02:16	18°♏48'17	
max. Earth dist.	-3614 Jul 04 j 12:06	17°♏18'07	2.64027 AU		-3609 Jan 05 j 08:55	0°♏	
					-3609 Feb 13 j 01:03	0°♏	
conjunction	-3614 Jul 21 j 02:48	28°♏08'10	1°10'32		-3609 Mar 25 j 00:05	0°♏	
minimum elong	-3614 Jul 21 j 02:28	28°♏07'37	1°10'40		-3609 May 06 j 03:41	0°♏	
	-3614 Jul 23 j 22:53	0°♏			-3609 Jun 20 j 15:49	0°♏	
morning rise	-3614 Sep 05 j 02:14	28°♏53'19			-3609 Aug 11 j 16:16	0°♏	
	-3614 Sep 06 j 17:17	0°♏		asc. node	-3609 Sep 10 j 10:28	13°♏34'18	
	-3614 Oct 19 j 18:57	0°♏		retrograde	-3609 Oct 23 j 01:30	22°♏57'09	
	-3614 Nov 30 j 09:06	0°♏		opposition	-3609 Dec 02 j 00:46	13°♏14'57	2°52'28
	-3613 Jan 09 j 21:37	0°♏		greatest brilliancy	-3609 Dec 01 j 22:34	13°♏17'08	-1.3m
desc. node	-3613 Jan 25 j 08:57	11°♏33'58		min. Earth dist.	-3609 Dec 01 j 21:04	13°♏18'39	0.67155 AU
	-3613 Feb 19 j 00:43	0°♏		direct	-3608 Jan 11 j 13:12	3°♏28'15	
	-3613 Mar 31 j 21:13	0°♏			-3608 Apr 02 j 00:54	0°♏	
	-3613 May 14 j 18:39	0°♏			-3608 May 24 j 11:54	0°♏	
	-3613 Jul 11 j 04:42	0°♏			-3608 Jul 09 j 13:14	0°♏	
retrograde	-3613 Aug 10 j 10:55	5°♏48'07			-3608 Aug 20 j 22:23	0°♏	
	-3613 Sep 08 j 09:55	30°♏		desc. node	-3608 Sep 16 j 03:35	19°♏31'47	
min. Earth dist.	-3613 Sep 10 j 12:17	29°♏13'48	0.52952 AU		-3608 Sep 29 j 21:09	0°♏	
opposition	-3613 Sep 17 j 19:35	26°♏27'48	-3°-27'-40	evening set	-3608 Oct 22 j 02:46	17°♏13'42	
greatest brilliancy	-3613 Sep 16 j 14:57	26°♏54'59	-1.9m		-3608 Nov 07 j 09:44	0°♏	
direct	-3613 Oct 22 j 20:08	18°♏44'04			-3608 Dec 15 j 11:36	0°♏	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 30

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

conjunction	-3608 Dec 26 j 01:18	8°♏17'22	0°-59'-33			-3603 Dec 21 j 09:43	0°♐	
minimum elong	-3608 Dec 25 j 22:34	8°♏12'01	0°59'39	retrograde		-3602 Mar 04 j 16:41	22°♐56'54	
	-3607 Jan 23 j 01:05	0°♑		opposition		-3602 Apr 06 j 08:55	16°♐52'45	2°03'45
max. Earth dist.	-3607 Feb 08 j 23:25	12°♑53'37	2.39848 AU	greatest brilliancy		-3602 Apr 07 j 08:54	16°♐33'48	-2.4m
morning rise	-3607 Mar 03 j 12:23	29°♑42'25		min. Earth dist.		-3602 Apr 14 j 06:06	14°♐24'24	0.43806 AU
	-3607 Mar 03 j 21:56	0°♒		desc. node		-3602 May 09 j 00:44	9°♐38'37	
	-3607 Apr 14 j 18:16	0°♓		direct		-3602 May 11 j 20:42	9°♐35'14	
	-3607 May 29 j 02:06	0°♑				-3602 Jul 12 j 06:48	0°♑	
	-3607 Jul 15 j 12:46	0°♒				-3602 Aug 28 j 09:44	0°♒	
asc. node	-3607 Jul 28 j 09:30	7°♒42'18				-3602 Oct 09 j 16:20	0°♓	
	-3607 Sep 06 j 09:03	0°♑				-3602 Nov 20 j 07:22	0°♑	
retrograde	-3607 Nov 26 j 18:14	26°♑42'50				-3601 Jan 01 j 17:58	0°♒	
opposition	-3606 Jan 04 j 16:01	17°♑40'33	4°36'06			-3601 Feb 14 j 15:32	0°♓	
greatest brilliancy	-3606 Jan 05 j 08:21	17°♑24'33	-1.3m	asc. node		-3601 Mar 20 j 03:21	22°♓12'09	
min. Earth dist.	-3606 Jan 08 j 08:20	16°♑14'04	0.65020 AU			-3601 Apr 01 j 01:53	0°♑	
direct	-3606 Feb 14 j 22:36	7°♑39'35		evening set		-3601 Apr 12 j 06:41	7°♑16'01	
	-3606 Apr 27 j 02:42	0°♑				-3601 May 17 j 15:31	0°♒	
	-3606 Jun 17 j 04:35	0°♑						
	-3606 Jul 31 j 00:59	0°♐		conjunction		-3601 May 30 j 18:33	8°♒23'08	0°38'15
desc. node	-3606 Aug 04 j 01:29	2°♐53'45		minimum elong		-3601 May 30 j 17:21	8°♒21'13	0°38'19
	-3606 Sep 09 j 12:01	0°♑		max. Earth dist.		-3601 Jun 02 j 00:01	9°♒48'25	2.66881 AU
	-3606 Oct 18 j 05:44	0°♒				-3601 Jul 03 j 15:52	0°♑	
	-3606 Nov 25 j 11:37	0°♓		morning rise		-3601 Jul 15 j 15:39	7°♑39'29	
evening set	-3606 Dec 30 j 02:30	26°♓49'30				-3601 Aug 19 j 11:28	0°♑	
	-3605 Jan 03 j 06:14	0°♑				-3601 Oct 04 j 18:42	0°♑	
	-3605 Feb 12 j 09:16	0°♒				-3601 Nov 19 j 16:22	0°♐	
						-3600 Jan 04 j 18:36	0°♑	
conjunction	-3605 Mar 02 j 01:17	12°♒47'16	0°-54'-44			-3600 Feb 21 j 16:53	0°♒	
minimum elong	-3605 Mar 02 j 03:32	12°♒51'17	0°54'51	desc. node		-3600 Mar 26 j 01:26	18°♒33'17	
	-3605 Mar 26 j 10:18	0°♓				-3600 Apr 21 j 19:48	0°♓	
max. Earth dist.	-3605 Apr 08 j 22:24	9°♓19'33	2.52787 AU	retrograde		-3600 May 21 j 09:41	5°♓20'24	
morning rise	-3605 Apr 28 j 05:55	22°♓25'04		min. Earth dist.		-3600 Jun 18 j 13:30	0°♓46'04	0.37973 AU
	-3605 May 09 j 14:49	0°♑		opposition		-3600 Jun 21 j 12:34	29°♒57'52	-5°-41'-13
asc. node	-3605 Jun 15 j 08:26	23°♑54'19		greatest brilliancy		-3600 Jun 20 j 17:32	0°♓10'47	-2.8m
	-3605 Jun 24 j 22:21	0°♒				-3600 Jun 21 j 09:26	30°♒♒	
	-3605 Aug 12 j 11:19	0°♑		direct		-3600 Jul 21 j 06:26	24°♒57'41	
	-3605 Oct 03 j 16:07	0°♑				-3600 Aug 19 j 04:48	0°♓	
	-3605 Dec 11 j 02:32	0°♑				-3600 Oct 19 j 07:15	0°♑	
retrograde	-3604 Jan 07 j 12:33	4°♑04'06				-3600 Dec 06 j 23:23	0°♒	
	-3604 Feb 02 j 00:17	30°♒♑				-3599 Jan 23 j 04:05	0°♓	
opposition	-3604 Feb 13 j 03:30	26°♑09'16	4°58'21	asc. node		-3599 Feb 04 j 01:46	7°♓33'48	
greatest brilliancy	-3604 Feb 14 j 19:57	25°♑31'47	-1.7m			-3599 Mar 11 j 12:24	0°♑	
min. Earth dist.	-3604 Feb 20 j 11:02	23°♑27'04	0.56560 AU			-3599 Apr 28 j 02:46	0°♒	
direct	-3604 Mar 24 j 07:45	16°♑38'54		evening set		-3599 May 20 j 18:24	14°♒18'39	
	-3604 May 13 j 09:58	0°♑				-3599 Jun 14 j 10:34	0°♑	
desc. node	-3604 Jun 21 j 00:01	21°♑16'20		max. Earth dist.		-3599 Jun 24 j 21:59	6°♑42'25	2.65884 AU
	-3604 Jul 04 j 15:03	0°♐						
	-3604 Aug 16 j 11:36	0°♑		conjunction		-3599 Jul 06 j 07:43	14°♑03'03	1°06'13
	-3604 Sep 25 j 08:31	0°♒		minimum elong		-3599 Jul 06 j 06:51	14°♑01'39	1°06'20
	-3604 Nov 03 j 09:12	0°♓				-3599 Jul 30 j 20:11	0°♑	
	-3604 Dec 12 j 20:44	0°♑		morning rise		-3599 Aug 20 j 15:08	13°♑43'34	
	-3603 Jan 22 j 16:02	0°♒				-3599 Sep 13 j 21:03	0°♑	
evening set	-3603 Feb 25 j 16:01	24°♒01'56				-3599 Oct 27 j 10:41	0°♐	
	-3603 Mar 06 j 07:22	0°♓				-3599 Dec 08 j 17:31	0°♑	
	-3603 Apr 19 j 20:38	0°♑				-3598 Jan 19 j 02:48	0°♒	
				desc. node		-3598 Feb 11 j 01:38	16°♒44'13	
conjunction	-3603 Apr 20 j 02:18	0°♑09'21	0°-7'-3			-3598 Mar 01 j 08:15	0°♓	
minimum elong	-3603 Apr 20 j 02:37	0°♑09'52	0°07'03			-3598 Apr 13 j 00:08	0°♑	
behind sun begin	-3603 Apr 19 j 07:20	29°♓38'02				-3598 Jun 01 j 08:14	0°♒	
behind sun end	-3603 Apr 20 j 21:54	0°♑41'40		retrograde		-3598 Jul 23 j 01:58	15°♒26'55	
asc. node	-3603 May 02 j 06:24	8°♑09'10		min. Earth dist.		-3598 Aug 20 j 23:56	9°♒44'49	0.47994 AU
max. Earth dist.	-3603 May 08 j 11:34	12°♑12'33	2.62448 AU	greatest brilliancy		-3598 Aug 27 j 05:49	7°♒30'58	-2.2m
	-3603 Jun 05 j 00:35	0°♒		opposition		-3598 Aug 29 j 01:09	6°♒52'05	-5°00'-18
morning rise	-3603 Jun 08 j 14:33	2°♒17'38				-3598 Sep 27 j 13:31	30°♒♑	
	-3603 Jul 22 j 07:26	0°♑		direct		-3598 Oct 01 j 08:11	29°♑54'18	
	-3603 Sep 08 j 11:25	0°♑				-3598 Oct 05 j 04:08	0°♒	
	-3603 Oct 28 j 02:48	0°♑		asc. node		-3598 Dec 23 j 01:02	28°♒13'15	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 31

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3598 Dec 26 j 09:55	0° H		conjunction	-3593 Nov 29 j 04:00	10° M 26'56	0°-38'-6
	-3597 Feb 17 j 13:47	0° Y		minimum elong	-3593 Nov 29 j 01:06	10° M 21'14	0°38'11
	-3597 Apr 08 j 14:38	0° B			-3593 Dec 24 j 00:06	0° Z	
	-3597 May 26 j 22:50	0° II			-3592 Jan 31 j 13:42	0° Z	
evening set	-3597 Jun 28 j 03:20	20° II 36'07		morning rise	-3592 Feb 05 j 07:45	3° Z 38'27	
	-3597 Jul 12 j 12:24	0° S			-3592 Mar 11 j 10:08	0° \approx	
max. Earth dist.	-3597 Jul 20 j 16:44	5° S 24'19	2.59626 AU		-3592 Apr 22 j 06:55	0° H	
					-3592 Jun 05 j 20:39	0° Y	
conjunction	-3597 Aug 14 j 11:01	22° S 02'36	1°07'50		-3592 Jul 24 j 07:11	0° B	
minimum elong	-3597 Aug 14 j 11:48	22° S 03'57	1°07'58	asc. node	-3592 Aug 14 j 01:50	11° B 46'24	
	-3597 Aug 26 j 01:53	0° Q			-3592 Sep 19 j 21:16	0° II	
morning rise	-3597 Oct 01 j 18:24	25° Q 46'40		retrograde	-3592 Nov 12 j 12:16	13° II 37'45	
	-3597 Oct 07 j 15:29	0° M		opposition	-3592 Dec 21 j 23:01	4° II 17'13	4°03'19
	-3597 Nov 17 j 12:21	0° A		greatest brilliancy	-3592 Dec 22 j 06:35	4° II 09'44	-1.3m
	-3597 Dec 27 j 04:38	0° M		min. Earth dist.	-3592 Dec 24 j 03:20	3° II 25'24	0.66619 AU
desc. node	-3597 Dec 30 j 01:35	2° M 11'41			-3591 Jan 02 j 02:43	30° R B	
	-3596 Feb 04 j 08:47	0° Z		direct	-3591 Feb 01 j 02:39	24° B 18'02	
	-3596 Mar 14 j 22:52	0° Z			-3591 Mar 05 j 20:27	0° II	
	-3596 Apr 25 j 05:59	0° \approx			-3591 May 08 j 23:00	0° S	
	-3596 Jun 09 j 18:29	0° H			-3591 Jun 26 j 03:55	0° Q	
	-3596 Aug 12 j 16:54	0° Y			-3591 Aug 08 j 05:28	0° M	
retrograde	-3596 Sep 03 j 14:26	3° Y 01'43		desc. node	-3591 Aug 20 j 18:55	9° M 11'59	
	-3596 Sep 24 j 07:17	30° R H			-3591 Sep 17 j 09:36	0° A	
min. Earth dist.	-3596 Oct 07 j 19:56	25° H 15'59	0.59633 AU		-3591 Oct 25 j 23:59	0° M	
opposition	-3596 Oct 13 j 03:50	23° H 09'23	-1°-7'-16	greatest brilliancy	-3591 Nov 18 j 00:15	18° M 06'46	1.2m
greatest brilliancy	-3596 Oct 12 j 20:35	23° H 16'34	-1.6m	evening set	-3591 Dec 03 j 07:47	0° Z 09'19	
asc. node	-3596 Nov 09 j 00:14	15° H 14'11			-3591 Dec 03 j 03:02	0° Z	
direct	-3596 Nov 19 j 10:20	14° H 31'21			-3590 Jan 10 j 18:25	0° Z	
	-3595 Jan 16 j 16:14	0° Y					
	-3595 Mar 16 j 08:29	0° B		conjunction	-3590 Feb 06 j 06:40	20° Z 02'18	-1°-5'-44
	-3595 May 06 j 08:14	0° II		minimum elong	-3590 Feb 06 j 07:57	20° Z 04'41	1°05'53
	-3595 Jun 22 j 19:02	0° S			-3590 Feb 19 j 17:50	0° \approx	
	-3595 Aug 06 j 09:48	0° Q		max. Earth dist.	-3590 Mar 23 j 21:04	23° \approx 08'32	2.47839 AU
evening set	-3595 Aug 07 j 23:34	1° Q 05'26			-3590 Apr 02 j 15:31	0° H	
max. Earth dist.	-3595 Aug 23 j 01:11	11° Q 39'13	2.48800 AU	morning rise	-3590 Apr 08 j 16:42	4° H 12'15	
	-3595 Sep 17 j 13:24	0° M			-3590 May 16 j 19:15	0° Y	
				asc. node	-3590 Jul 02 j 00:26	29° Y 46'57	
conjunction	-3595 Sep 28 j 19:36	8° M 16'30	0°32'05		-3590 Jul 02 j 08:45	0° B	
minimum elong	-3595 Sep 28 j 21:16	8° M 19'35	0°32'07		-3590 Aug 20 j 22:11	0° II	
	-3595 Oct 27 j 18:11	0° A			-3590 Oct 16 j 02:38	0° S	
desc. node	-3595 Nov 15 j 23:25	14° A 43'41		retrograde	-3590 Dec 21 j 02:32	18° S 55'02	
morning rise	-3595 Nov 25 j 01:03	21° A 44'22		opposition	-3589 Jan 27 j 19:04	10° S 29'33	5°03'09
	-3595 Dec 05 j 16:14	0° M		greatest brilliancy	-3589 Jan 29 j 02:48	9° S 59'16	-1.5m
	-3594 Jan 13 j 02:27	0° Z		min. Earth dist.	-3589 Feb 02 j 18:37	8° S 12'52	0.60588 AU
	-3594 Feb 20 j 21:41	0° Z		direct	-3589 Mar 09 j 16:31	0° S 39'11	
	-3594 Apr 02 j 00:10	0° \approx			-3589 May 30 j 11:20	0° Q	
	-3594 May 14 j 11:40	0° H		desc. node	-3589 Jul 08 j 17:29	24° Q 49'05	
	-3594 Jun 30 j 02:40	0° Y			-3589 Jul 16 j 07:05	0° M	
	-3594 Aug 27 j 02:05	0° B			-3589 Aug 26 j 18:46	0° A	
asc. node	-3594 Sep 27 j 00:48	8° B 57'25			-3589 Oct 05 j 00:43	0° M	
retrograde	-3594 Oct 09 j 15:58	9° B 56'48			-3589 Nov 12 j 15:08	0° Z	
min. Earth dist.	-3594 Nov 17 j 03:02	0° B 44'26	0.66234 AU		-3589 Dec 21 j 17:36	0° Z	
opposition	-3594 Nov 18 j 18:15	0° B 05'02	1°56'49		-3588 Jan 31 j 04:29	0° \approx	
	-3594 Nov 18 j 23:16	30° R Y		evening set	-3588 Feb 05 j 18:54	4° \approx 03'10	
greatest brilliancy	-3594 Nov 18 j 13:18	0° B 10'01	-1.3m		-3588 Mar 13 j 12:21	0° H	
direct	-3594 Dec 28 j 14:30	20° Y 31'41					
	-3593 Feb 10 j 14:57	0° B		conjunction	-3588 Apr 02 j 04:30	13° H 28'26	0°-26'-40
	-3593 Apr 13 j 15:33	0° II		minimum elong	-3588 Apr 02 j 05:48	13° H 30'38	0°26'43
	-3593 Jun 02 j 18:10	0° S			-3588 Apr 26 j 20:35	0° Y	
	-3593 Jul 18 j 03:48	0° Q		max. Earth dist.	-3588 Apr 27 j 17:50	0° Y 35'11	2.59266 AU
	-3593 Aug 29 j 08:45	0° M		asc. node	-3588 May 18 j 22:04	14° Y 28'37	
evening set	-3593 Sep 28 j 16:34	22° M 39'14		morning rise	-3588 May 24 j 03:01	17° Y 51'24	
desc. node	-3593 Oct 03 j 20:40	26° M 35'39			-3588 Jun 11 j 23:49	0° B	
	-3593 Oct 08 j 07:28	0° A			-3588 Jul 29 j 14:19	0° II	
	-3593 Nov 15 j 21:17	0° M			-3588 Sep 16 j 18:55	0° S	
max. Earth dist.	-3593 Nov 18 j 13:00	2° M 05'11	2.37696 AU		-3588 Nov 08 j 09:05	0° Q	
					-3587 Jan 20 j 08:32	0° M	

Planetary Phenomena of Mars from -3900 through -3400 (UT), AstroDienst AG 7-Dez-2017 14:37, page 32

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

retrograde	-3587 Feb 07 j 19:39	1°♄56'01			-3582 Feb 26 j 06:47	0°♂	
	-3587 Feb 25 j 06:59	30°♄♂			-3582 Apr 16 j 02:12	0°♂	
opposition	-3587 Mar 14 j 04:08	25°♂03'18	3°49'59		-3582 Jun 02 j 22:24	0°♂	
greatest brilliancy	-3587 Mar 15 j 21:47	24°♂27'33	-2.1m	evening set	-3582 Jun 13 j 02:58	6°♂29'37	
min. Earth dist.	-3587 Mar 22 j 15:25	22°♂09'33	0.48916 AU	max. Earth dist.	-3582 Jul 10 j 06:45	24°♂02'10	2.62672 AU
direct	-3587 Apr 21 j 02:08	16°♂37'02			-3582 Jul 19 j 09:12	0°♂	
desc. node	-3587 May 25 j 16:26	23°♂52'58					
	-3587 Jun 08 j 17:19	0°♄		conjunction	-3582 Jul 29 j 18:54	6°♂52'32	1°11'00
	-3587 Jul 29 j 05:13	0°♂		minimum elong	-3582 Jul 29 j 18:58	6°♂52'38	1°11'07
	-3587 Sep 09 j 12:05	0°♄			-3582 Sep 02 j 01:52	0°♂	
	-3587 Oct 19 j 20:43	0°♂		morning rise	-3582 Sep 14 j 09:08	8°♂28'51	
	-3587 Nov 29 j 07:30	0°♂			-3582 Oct 14 j 23:11	0°♄	
	-3586 Jan 09 j 21:45	0°♄			-3582 Nov 25 j 06:41	0°♂	
	-3586 Feb 22 j 04:04	0°♂			-3581 Jan 04 j 11:14	0°♄	
evening set	-3586 Mar 26 j 14:43	21°♂44'13		desc. node	-3581 Jan 15 j 18:05	8°♄30'56	
asc. node	-3586 Apr 05 j 19:45	28°♂27'50			-3581 Feb 13 j 04:32	0°♂	
	-3586 Apr 08 j 03:56	0°♂			-3581 Mar 25 j 10:47	0°♂	
					-3581 May 07 j 00:02	0°♄	
conjunction	-3586 May 15 j 14:45	24°♂17'48	0°22'14		-3581 Jun 25 j 20:43	0°♂	
minimum elong	-3586 May 15 j 13:55	24°♂16'27	0°22'17	retrograde	-3581 Aug 20 j 00:57	16°♂31'20	
max. Earth dist.	-3586 May 23 j 21:06	29°♂36'07	2.65795 AU	min. Earth dist.	-3581 Sep 21 j 06:09	9°♂29'47	0.55506 AU
	-3586 May 24 j 12:01	0°♂		opposition	-3581 Sep 27 j 21:47	6°♂55'29	-2°-34'-41
morning rise	-3586 Jul 01 j 12:25	24°♂15'32		greatest brilliancy	-3581 Sep 27 j 01:49	7°♂14'48	-1.8m
	-3586 Jul 10 j 13:03	0°♂			-3581 Oct 20 j 14:18	30°♄	
	-3586 Aug 26 j 17:52	0°♂		direct	-3581 Nov 02 j 19:10	28°♄50'11	
	-3586 Oct 12 j 23:02	0°♂			-3581 Nov 16 j 14:42	0°♂	
	-3586 Nov 29 j 17:03	0°♄		asc. node	-3581 Nov 26 j 15:28	2°♂06'04	
	-3585 Jan 18 j 19:28	0°♂			-3580 Jan 31 j 15:03	0°♂	
	-3585 Mar 23 j 18:50	0°♄			-3580 Mar 25 j 06:03	0°♂	
desc. node	-3585 Apr 12 j 18:28	4°♄08'12			-3580 May 13 j 21:31	0°♂	
retrograde	-3585 Apr 20 j 22:04	4°♄33'07			-3580 Jun 29 j 21:49	0°♂	
	-3585 May 19 j 11:36	30°♄♂		evening set	-3580 Jul 21 j 23:27	14°♂39'30	
opposition	-3585 May 21 j 08:04	29°♂30'10	-2°-48'-1	max. Earth dist.	-3580 Aug 07 j 21:32	26°♂10'00	2.53471 AU
greatest brilliancy	-3585 May 21 j 15:14	29°♂25'20	-2.8m		-3580 Aug 13 j 10:59	0°♂	
min. Earth dist.	-3585 May 23 j 22:21	28°♂48'09	0.38144 AU				
direct	-3585 Jun 21 j 10:18	24°♂09'54		conjunction	-3580 Sep 09 j 11:16	18°♂59'46	0°51'04
	-3585 Jul 22 j 01:26	0°♄		minimum elong	-3580 Sep 09 j 13:01	19°♂02'53	0°51'09
	-3585 Sep 17 j 22:43	0°♂			-3580 Sep 24 j 17:37	0°♄	
	-3585 Nov 03 j 05:39	0°♂		morning rise	-3580 Nov 01 j 07:38	27°♄51'48	
	-3585 Dec 18 j 04:18	0°♄			-3580 Nov 04 j 03:32	0°♂	
	-3584 Feb 01 j 14:47	0°♂		desc. node	-3580 Dec 02 j 16:34	21°♂48'12	
asc. node	-3584 Feb 21 j 16:46	13°♂03'37			-3580 Dec 13 j 07:23	0°♄	
	-3584 Mar 19 j 00:14	0°♂			-3579 Jan 20 j 22:57	0°♂	
evening set	-3584 May 05 j 20:07	0°♂28'01			-3579 Feb 28 j 23:06	0°♂	
	-3584 May 05 j 02:28	0°♂			-3579 Apr 10 j 08:12	0°♄	
max. Earth dist.	-3584 Jun 15 j 13:56	26°♂22'56	2.66926 AU		-3579 May 23 j 10:47	0°♂	
					-3579 Jul 11 j 06:25	0°♂	
conjunction	-3584 Jun 21 j 19:57	0°♂22'34	0°58'00	retrograde	-3579 Sep 26 j 02:16	26°♂26'42	
minimum elong	-3584 Jun 21 j 18:45	0°♂20'39	0°58'06	asc. node	-3579 Oct 13 j 16:03	24°♂19'10	
	-3584 Jun 21 j 05:50	0°♂		min. Earth dist.	-3579 Nov 02 j 00:43	17°♂44'28	0.64358 AU
morning rise	-3584 Aug 05 j 23:40	29°♂30'22		opposition	-3579 Nov 05 j 03:01	16°♂29'53	0°52'30
	-3584 Aug 06 j 17:51	0°♂		greatest brilliancy	-3579 Nov 04 j 23:04	16°♂33'51	-1.4m
	-3584 Sep 21 j 03:55	0°♂		direct	-3579 Dec 14 j 02:19	7°♂14'17	
	-3584 Nov 04 j 10:13	0°♄			-3578 Feb 26 j 12:32	0°♂	
	-3584 Dec 17 j 17:18	0°♂			-3578 Apr 22 j 19:05	0°♂	
	-3583 Jan 29 j 12:02	0°♄			-3578 Jun 10 j 12:50	0°♂	
desc. node	-3583 Feb 27 j 19:28	20°♄25'02			-3578 Jul 25 j 12:50	0°♂	
	-3583 Mar 13 j 20:02	0°♂			-3578 Sep 05 j 16:25	0°♄	
	-3583 Apr 30 j 07:49	0°♂		evening set	-3578 Sep 06 j 20:37	0°♄51'40	
retrograde	-3583 Jul 01 j 21:08	21°♂21'34		max. Earth dist.	-3578 Sep 27 j 19:08	16°♄24'56	2.41195 AU
min. Earth dist.	-3583 Jul 29 j 00:17	16°♂28'47	0.43040 AU		-3578 Oct 15 j 16:47	0°♂	
greatest brilliancy	-3583 Aug 03 j 15:49	14°♂38'47	-2.5m	desc. node	-3578 Oct 20 j 14:36	3°♂45'48	
opposition	-3583 Aug 05 j 17:24	13°♂58'09	-6°-15'-34				
direct	-3583 Sep 06 j 05:28	7°♂54'05		conjunction	-3578 Nov 03 j 02:56	14°♂11'59	0°-9'-35
	-3583 Nov 14 j 13:32	0°♄		minimum elong	-3578 Nov 03 j 02:11	14°♂10'32	0°09'37
	-3582 Jan 07 j 08:41	0°♂		behind sun begin	-3578 Nov 02 j 04:56	13°♂29'19	
asc. node	-3582 Jan 08 j 15:18	0°♂45'07		behind sun end	-3578 Nov 03 j 23:27	14°♂51'46	

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3578 Nov 23 j 09:03	0°♌	opposition	-3572 Feb 23 j 06:59	6°♏14'35	4°43'34
	-3578 Dec 31 j 13:45	0°♊	greatest brilliancy	-3572 Feb 25 j 02:23	5°♏35'12	-1.8m
morning rise	-3577 Jan 07 j 06:16	5°♊14'28	min. Earth dist.	-3572 Mar 02 j 04:24	3°♏23'12	0.54014 AU
	-3577 Feb 08 j 04:10	0°♊		-3572 Mar 12 j 18:35	30°♏	
	-3577 Mar 20 j 01:07	0°♋	direct	-3572 Apr 02 j 20:27	27°♏01'15	
	-3577 May 01 j 00:20	0°♌		-3572 Apr 24 j 15:56	0°♏	
	-3577 Jun 15 j 00:50	0°♍	desc. node	-3572 Jun 11 j 10:40	20°♏50'52	
asc. node	-3577 Aug 04 j 05:18	0°♎		-3572 Jun 26 j 19:24	0°♏	
	-3577 Aug 31 j 16:18	14°♏01'02		-3572 Aug 10 j 03:56	0°♏	
	-3577 Oct 19 j 12:09	0°♐		-3572 Sep 19 j 15:06	0°♏	
retrograde	-3577 Oct 30 j 19:43	0°♐46'39		-3572 Oct 28 j 23:57	0°♊	
	-3577 Nov 10 j 17:45	30°♏		-3572 Dec 07 j 17:15	0°♊	
opposition	-3577 Dec 09 j 15:33	21°♏11'18 3°21'06		-3571 Jan 17 j 17:21	0°♋	
greatest brilliancy	-3577 Dec 09 j 16:13	21°♏10'38 -1.3m		-3571 Mar 01 j 12:21	0°♌	
min. Earth dist.	-3577 Dec 10 j 08:02	20°♏54'50 0.67233 AU	evening set	-3571 Mar 08 j 16:27	4°♌53'59	
direct	-3576 Jan 19 j 10:39	11°♏18'51		-3571 Apr 15 j 04:13	0°♍	
	-3576 Mar 24 j 18:53	0°♐	asc. node	-3571 Apr 22 j 10:49	4°♍47'01	
	-3576 May 18 j 17:20	0°♑				
	-3576 Jul 04 j 10:02	0°♒	conjunction	-3571 Apr 29 j 17:24	9°♍32'34 0°04'13	
	-3576 Aug 16 j 00:43	0°♓	minimum elong	-3571 Apr 29 j 17:14	9°♍32'18 0°04'14	
desc. node	-3576 Sep 06 j 11:45	15°♓53'47	behind sun begin	-3571 Apr 28 j 21:04	8°♍59'25	
	-3576 Sep 25 j 01:24	0°♐	behind sun end	-3571 Apr 30 j 13:24	10°♍05'10	
	-3576 Nov 02 j 14:41	0°♑	max. Earth dist.	-3571 May 14 j 09:12	19°♍03'52 2.63879 AU	
evening set	-3576 Nov 06 j 00:49	2°♑41'31		-3571 May 31 j 08:38	0°♒	
	-3576 Dec 10 j 16:47	0°♓	morning rise	-3571 Jun 17 j 03:19	10°♒43'31	
				-3571 Jul 17 j 12:30	0°♐	
conjunction	-3575 Jan 10 j 19:11	24°♓15'06 -1°-5'-50		-3571 Sep 03 j 06:19	0°♑	
minimum elong	-3575 Jan 10 j 17:50	24°♓12'29 1°05'59		-3571 Oct 21 j 19:25	0°♒	
	-3575 Jan 18 j 06:24	0°♊		-3571 Dec 11 j 18:31	0°♓	
	-3575 Feb 27 j 03:24	0°♋		-3570 Feb 12 j 10:27	0°♐	
max. Earth dist.	-3575 Mar 01 j 09:00	1°♋38'30 2.42586 AU	retrograde	-3570 Mar 20 j 14:44	6°♐58'46	
morning rise	-3575 Mar 17 j 10:57	13°♋20'03	opposition	-3570 Apr 21 j 08:28	1°♐21'58 0°33'06	
	-3575 Apr 09 j 22:58	0°♌	greatest brilliancy	-3570 Apr 21 j 14:34	1°♐17'26 -2.6m	
	-3575 May 24 j 03:38	0°♍		-3570 Apr 25 j 23:07	30°♓	
	-3575 Jul 10 j 03:30	0°♎	min. Earth dist.	-3570 Apr 28 j 02:20	29°♓22'44 0.41291 AU	
asc. node	-3575 Jul 18 j 16:08	5°♎12'57	desc. node	-3570 Apr 29 j 10:37	28°♓59'43	
	-3575 Aug 30 j 09:02	0°♐	direct	-3570 May 25 j 04:53	24°♓49'45	
	-3575 Nov 05 j 03:39	0°♑		-3570 Jun 22 j 17:12	0°♐	
retrograde	-3575 Dec 05 j 06:45	4°♑51'18		-3570 Aug 19 j 02:47	0°♑	
	-3574 Jan 01 j 23:47	30°♒		-3570 Oct 02 j 13:21	0°♓	
opposition	-3574 Jan 12 j 19:31	26°♒00'49 4°49'50		-3570 Nov 14 j 05:14	0°♊	
greatest brilliancy	-3574 Jan 13 j 17:21	25°♒39'36 -1.4m		-3570 Dec 27 j 07:05	0°♋	
min. Earth dist.	-3574 Jan 17 j 08:07	24°♒15'19 0.63714 AU		-3569 Feb 09 j 14:28	0°♌	
direct	-3574 Feb 23 j 00:55	16°♒01'12	asc. node	-3569 Mar 10 j 08:57	18°♌59'09	
	-3574 Apr 17 j 10:05	0°♑		-3569 Mar 27 j 07:10	0°♍	
	-3574 Jun 10 j 22:12	0°♒	evening set	-3569 Apr 21 j 10:07	16°♍11'29	
desc. node	-3574 Jul 25 j 10:43	29°♒54'34		-3569 May 13 j 00:09	0°♎	
	-3574 Jul 25 j 13:46	0°♓	max. Earth dist.	-3569 Jun 07 j 09:43	16°♎11'39 2.67129 AU	
	-3574 Sep 04 j 07:51	0°♐				
	-3574 Oct 13 j 05:03	0°♑	conjunction	-3569 Jun 08 j 06:27	16°♎44'41 0°46'23	
	-3574 Nov 20 j 13:05	0°♓	minimum elong	-3569 Jun 08 j 05:10	16°♎42'39 0°46'29	
	-3574 Dec 29 j 09:28	0°♊		-3569 Jun 29 j 01:06	0°♐	
evening set	-3573 Jan 13 j 11:51	11°♊24'45	morning rise	-3569 Jul 23 j 18:15	15°♐49'51	
	-3573 Feb 07 j 14:21	0°♋		-3569 Aug 14 j 17:35	0°♑	
				-3569 Sep 29 j 16:13	0°♒	
conjunction	-3573 Mar 14 j 09:36	24°♋54'14 0°-45'-23		-3569 Nov 13 j 21:20	0°♓	
minimum elong	-3573 Mar 14 j 11:43	24°♋57'57 0°45'28		-3569 Dec 28 j 16:55	0°♐	
	-3573 Mar 21 j 16:44	0°♌		-3568 Feb 11 j 23:42	0°♑	
max. Earth dist.	-3573 Apr 16 j 16:07	17°♌48'03 2.55315 AU	desc. node	-3568 Mar 16 j 11:38	21°♑07'02	
	-3573 May 04 j 21:31	0°♍		-3568 Mar 31 j 17:33	0°♓	
morning rise	-3573 May 08 j 11:32	2°♍22'24	retrograde	-3568 Jun 06 j 18:57	23°♓06'24	
asc. node	-3573 Jun 05 j 14:01	20°♍42'40	min. Earth dist.	-3568 Jul 03 j 14:50	18°♓39'47 0.39183 AU	
	-3573 Jun 20 j 02:04	0°♎	greatest brilliancy	-3568 Jul 07 j 12:28	17°♓32'57 -2.7m	
	-3573 Aug 07 j 04:31	0°♐	opposition	-3568 Jul 09 j 00:12	17°♓07'12 -6°-27'-2	
	-3573 Sep 26 j 23:17	0°♑	direct	-3568 Aug 08 j 02:56	11°♓52'27	
	-3573 Nov 24 j 18:08	0°♒		-3568 Oct 07 j 06:37	0°♊	
retrograde	-3572 Jan 18 j 09:31	13°♒49'36		-3568 Nov 29 j 14:13	0°♋	

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3567 Jan 17 j 07:48	0° H			-3563 Nov 30 j 20:55	0° M		
asc. node	-3567 Jan 25 j 07:42	4° $\text{H}59'01$		morning rise	-3563 Dec 09 j 23:00	7° $\text{M}06'06$		
	-3567 Mar 06 j 09:16	0° Y		greatest brilliancy	-3562 Jan 05 j 04:20	27° $\text{M}38'20$	1.2m	
	-3567 Apr 23 j 08:08	0° B			-3562 Jan 08 j 04:47	0° A		
evening set	-3567 May 29 j 06:51	22° $\text{B}39'39$			-3562 Feb 15 j 21:34	0° C		
	-3567 Jun 09 j 19:47	0° I			-3562 Mar 27 j 20:57	0° \approx		
max. Earth dist.	-3567 Jun 30 j 12:29	13° $\text{I}16'10$	2.64962 AU		-3562 May 09 j 01:56	0° H		
					-3562 Jun 23 j 21:29	0° Y		
conjunction	-3567 Jul 14 j 18:19	22° $\text{I}29'59$	1°09'13		-3562 Aug 16 j 12:43	0° B		
minimum elong	-3567 Jul 14 j 17:45	22° $\text{I}29'03$	1°09'21	asc. node	-3562 Sep 17 j 07:47	12° $\text{B}50'04$		
	-3567 Jul 26 j 05:46	0° D		retrograde	-3562 Oct 17 j 09:32	17° $\text{B}53'08$		
morning rise	-3567 Aug 29 j 08:44	22° $\text{D}41'32$		opposition	-3562 Nov 26 j 10:17	8° $\text{B}06'18$	2°30'14	
	-3567 Sep 09 j 03:43	0° O		greatest brilliancy	-3562 Nov 26 j 06:26	8° $\text{B}10'09$	-1.3m	
	-3567 Oct 22 j 11:25	0° N		min. Earth dist.	-3562 Nov 25 j 14:55	8° $\text{B}25'44$	0.66871 AU	
	-3567 Dec 03 j 09:07	0° L			-3562 Dec 21 j 00:21	30° RY		
desc. node	-3566 Jan 13 j 06:29	0° M		direct	-3561 Jan 05 j 15:35	28° $\text{Y}25'01$		
	-3566 Feb 01 j 11:53	14° $\text{M}14'15$			-3561 Jan 22 j 06:03	0° B		
	-3566 Feb 22 j 19:31	0° A			-3561 Apr 07 j 00:27	0° I		
	-3566 Apr 05 j 06:12	0° C			-3561 May 28 j 10:36	0° D		
	-3566 May 20 j 14:42	0° \approx			-3561 Jul 13 j 06:17	0° O		
retrograde	-3566 Aug 02 j 20:36	27° $\approx\text{A}48'39$			-3561 Aug 24 j 14:56	0° N		
min. Earth dist.	-3566 Sep 01 j 22:05	21° $\approx\text{A}37'34$	0.50762 AU	desc. node	-3561 Sep 24 j 06:52	22° $\text{N}53'11$		
greatest brilliancy	-3566 Sep 08 j 04:16	19° $\approx\text{A}18'41$	-2.0m		-3561 Oct 03 j 14:25	0° L		
opposition	-3566 Sep 09 j 15:35	18° $\approx\text{A}45'53$	-4°-7'-56	evening set	-3561 Oct 12 j 03:10	6° $\text{L}34'06$		
direct	-3566 Oct 13 j 22:44	11° $\approx\text{A}21'31$			-3561 Nov 11 j 03:51	0° M		
asc. node	-3566 Dec 13 j 06:40	28° $\approx\text{A}20'21$						
	-3566 Dec 16 j 20:17	0° H		conjunction	-3561 Dec 14 j 18:35	26° $\text{M}28'56$	0°-51'-38	
	-3565 Feb 11 j 09:22	0° Y		minimum elong	-3561 Dec 14 j 15:21	26° $\text{M}22'35$	0°51'44	
	-3565 Apr 03 j 10:16	0° B			-3561 Dec 19 j 05:54	0° A		
	-3565 May 22 j 04:17	0° I		max. Earth dist.	-3560 Jan 15 j 10:49	21° $\text{A}15'30$	2.38103 AU	
evening set	-3565 Jul 06 j 23:48	29° $\text{I}24'18$			-3560 Jan 26 j 18:34	0° C		
	-3565 Jul 07 j 21:33	0° D		morning rise	-3560 Feb 21 j 01:17	19° $\text{C}11'48$		
max. Earth dist.	-3565 Jul 27 j 08:23	12° $\text{D}54'58$	2.57603 AU		-3560 Mar 06 j 14:03	0° \approx		
	-3565 Aug 21 j 11:01	0° O			-3560 Apr 17 j 09:00	0° H		
					-3560 May 31 j 17:20	0° Y		
conjunction	-3565 Aug 23 j 22:00	1° $\text{O}41'52$	1°03'28		-3560 Jul 18 j 10:43	0° B		
minimum elong	-3565 Aug 23 j 23:13	1° $\text{O}43'58$	1°03'34	asc. node	-3560 Aug 04 j 06:52	9° $\text{B}53'58$		
	-3565 Oct 02 j 22:23	0° N			-3560 Sep 10 j 16:19	0° I		
morning rise	-3565 Oct 12 j 13:18	6° $\text{N}59'16$		retrograde	-3560 Nov 20 j 14:41	21° $\text{I}32'02$		
	-3565							

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 35

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

min. Earth dist.	-3557 Feb 12 j 16:08	17° $\overline{50}$ 09'29	0.58470 AU			-3552 Apr 30 j 09:43	0° $\overline{8}$	
direct	-3557 Mar 18 j 11:36	10° $\overline{50}$ 00'13		evening set		-3552 May 14 j 10:40	8° $\overline{8}$ 53'10	
	-3557 May 21 j 12:28	0° $\overline{9}$				-3552 Jun 16 j 15:40	0° \overline{II}	
desc. node	-3557 Jun 29 j 02:53	22° $\overline{9}$ 53'04		max. Earth dist.		-3552 Jun 20 j 23:25	2° \overline{II} 45'53	2.66452 AU
	-3557 Jul 09 j 21:01	0° \overline{III}						
	-3557 Aug 21 j 02:12	0° \overline{IV}		conjunction		-3552 Jun 30 j 03:29	8° \overline{II} 38'41	1°03'13
	-3557 Sep 29 j 16:10	0° \overline{V}		minimum elong		-3552 Jun 30 j 02:28	8° \overline{II} 37'01	1°03'20
	-3557 Nov 07 j 11:44	0° \overline{VI}				-3552 Aug 02 j 02:41	0° \overline{VII}	
	-3557 Dec 16 j 18:09	0° \overline{VII}		morning rise		-3552 Aug 14 j 07:43	8° \overline{VII} 00'42	
	-3556 Jan 26 j 08:26	0° \overline{VIII}				-3552 Sep 16 j 08:03	0° $\overline{9}$	
evening set	-3556 Feb 17 j 21:55	16° \overline{VIII} 07'24				-3552 Oct 30 j 05:12	0° \overline{III}	
	-3556 Mar 08 j 19:01	0° \overline{IX}				-3552 Dec 11 j 22:14	0° \overline{IV}	
						-3551 Jan 22 j 20:39	0° \overline{V}	
conjunction	-3556 Apr 12 j 14:29	23° \overline{IX} 37'30	0°-15'-19	desc. node		-3551 Feb 18 j 03:57	18° \overline{V} 52'07	
minimum elong	-3556 Apr 12 j 15:12	23° \overline{IX} 38'43	0°15'21			-3551 Mar 05 j 19:47	0° \overline{VI}	
behind sun begin	-3556 Apr 12 j 10:15	23° \overline{IX} 30'28				-3551 Apr 18 j 20:50	0° \overline{VII}	
behind sun end	-3556 Apr 12 j 20:09	23° \overline{IX} 46'59				-3551 Jun 14 j 04:27	0° \overline{VIII}	
	-3556 Apr 22 j 04:41	0° \overline{IX}		retrograde		-3551 Jul 14 j 07:46	5° \overline{VIII} 55'51	
max. Earth dist.	-3556 May 04 j 01:56	7° \overline{IX} 49'47	2.61119 AU	min. Earth dist.		-3551 Aug 11 j 08:05	0° \overline{VIII} 37'18	0.45734 AU
asc. node	-3556 May 09 j 03:55	11° \overline{IX} 09'24				-3551 Aug 13 j 04:08	30° \overline{IX}	
morning rise	-3556 Jun 02 j 02:52	26° \overline{IX} 40'35		greatest brilliancy		-3551 Aug 17 j 10:50	28° \overline{IX} 31'11	-2.3m
	-3556 Jun 07 j 07:06	0° \overline{X}		opposition		-3551 Aug 19 j 10:37	27° \overline{IX} 49'52	-5°-36'-59
	-3556 Jul 24 j 16:17	0° \overline{XI}		direct		-3551 Sep 20 j 22:07	21° \overline{IX} 15'27	
	-3556 Sep 11 j 05:11	0° \overline{XII}				-3551 Oct 31 j 05:13	0° \overline{X}	
	-3556 Oct 31 j 21:08	0° \overline{I}		asc. node		-3551 Dec 29 j 21:58	29° \overline{X} 19'25	
	-3556 Dec 29 j 03:54	0° \overline{II}				-3551 Dec 31 j 03:01	0° \overline{XI}	
retrograde	-3555 Feb 21 j 08:11	13° \overline{II} 49'53				-3550 Feb 20 j 15:50	0° \overline{XII}	
opposition	-3555 Mar 26 j 19:17	7° \overline{II} 23'12	2°56'51			-3550 Apr 11 j 02:50	0° \overline{I}	
greatest brilliancy	-3555 Mar 28 j 05:09	6° \overline{II} 55'17	-2.3m			-3550 May 29 j 06:05	0° \overline{II}	
min. Earth dist.	-3555 Apr 04 j 03:30	4° \overline{II} 39'24	0.46057 AU	evening set		-3550 Jun 21 j 16:11	14° \overline{II} 57'06	
	-3555 Apr 24 j 08:35	30° \overline{II}				-3550 Jul 14 j 19:13	0° \overline{III}	
direct	-3555 May 02 j 10:59	29° \overline{II} 32'12		max. Earth dist.		-3550 Jul 16 j 07:18	0° \overline{III} 59'19	2.61091 AU
	-3555 May 10 j 16:09	0° \overline{III}						
desc. node	-3555 May 16 j 03:17	0° \overline{III} 47'40		conjunction		-3550 Aug 07 j 15:09	15° \overline{III} 50'36	1°09'48
	-3555 Jul 20 j 02:13	0° \overline{IV}		minimum elong		-3550 Aug 07 j 15:38	15° \overline{III} 51'26	1°09'56
	-3555 Sep 02 j 11:07	0° \overline{V}				-3550 Aug 28 j 11:06	0° \overline{IV}	
	-3555 Oct 13 j 17:27	0° \overline{VI}		morning rise		-3550 Sep 24 j 01:39	18° \overline{IV} 31'17	
	-3555 Nov 23 j 17:27	0° \overline{VII}				-3550 Oct 10 j 05:01	0° \overline{V}	
	-3554 Jan 04 j 17:02	0° \overline{VIII}				-3550 Nov 20 j 07:07	0° \overline{VI}	
	-3554 Feb 17 j 06:12	0° \overline{IX}				-3550 Dec 30 j 04:47	0° \overline{VII}	
asc. node	-3554 Mar 27 j 01:04	25° \overline{IX} 09'15		desc. node		-3549 Jan 06 j 04:09	5° \overline{VII} 17'54	
	-3554 Apr 03 j 10:39	0° \overline{X}				-3549 Feb 07 j 14:12	0° \overline{VIII}	
evening set	-3554 Apr 05 j 06:43	1° \overline{X} 11'56				-3549 Mar 19 j 09:38	0° \overline{IX}	
	-3554 May 19 j 20:58	0° \overline{XI}				-3549 Apr 30 j 01:50	0° \overline{X}	
						-3549 Jun 15 j 18:38	0° \overline{XI}	
conjunction	-3554 May 24 j 09:19	2° \overline{XI} 53'25	0°31'50	retrograde		-3549 Aug 29 j 03:49	26° \overline{XI} 37'42	
minimum elong	-3554 May 24 j 08:14	2° \overline{XI} 51'40	0°31'54	min. Earth dist.		-3549 Oct 01 j 12:17	19° \overline{XI} 10'25	0.57892 AU
max. Earth dist.	-3554 May 29 j 07:32	6° \overline{XI} 02'19	2.66497 AU	opposition		-3549 Oct 07 j 10:22	16° \overline{XI} 50'54	-1°-43'-8
	-3554 Jul 05 j 21:17	0° \overline{XII}		greatest brilliancy		-3549 Oct 06 j 22:11	17° \overline{XI} 02'53	-1.7m
morning rise	-3554 Jul 09 j 15:58	2° \overline{XII} 24'31		direct		-3549 Nov 13 j 02:25	8° \overline{XI} 26'20	
	-3554 Aug 21 j 20:38	0° \overline{I}		asc. node		-3549 Nov 16 j 21:13	8° \overline{XI} 31'48	
	-3554 Oct 07 j 12:51	0° \overline{II}				-3548 Jan 23 j 07:41	0° \overline{XII}	
	-3554 Nov 23 j 03:44	0° \overline{III}				-3548 Mar 19 j 11:45	0° \overline{I}	
	-3553 Jan 09 j 14:55	0° \overline{IV}				-3548 May 08 j 21:37	0° \overline{II}	
	-3553 Mar 02 j 02:07	0° \overline{V}				-3548 Jun 25 j 04:49	0° \overline{III}	
desc. node	-3553 Apr 03 j 04:06	14° \overline{V} 47'04		evening set		-3548 Jul 31 j 12:19	24° \overline{V} 16'25	
retrograde	-3553 May 08 j 19:34	22° \overline{V} 05'43				-3548 Aug 08 j 20:06	0° \overline{IV}	
opposition	-3553 Jun 08 j 09:46	16° \overline{V} 59'58	-4°-37'-26	max. Earth dist.		-3548 Aug 16 j 05:07	5° \overline{IV} 07'27	2.50955 AU
greatest brilliancy	-3553 Jun 08 j 05:16	17° \overline{V} 02'58	-2.9m					
min. Earth dist.	-3553 Jun 07 j 21:11	17° \overline{V} 08'21	0.37657 AU	conjunction		-3548 Sep 20 j 04:25	0° \overline{V} 03'57	0°41'01
direct	-3553 Jul 08 j 10:51	11° \overline{V} 58'46		minimum elong		-3548 Sep 20 j 06:13	0° \overline{V} 07'13	0°41'04
	-3553 Sep 05 j 01:37	0° \overline{VI}				-3548 Sep 20 j 02:15	0° \overline{VI}	
	-3553 Oct 26 j 06:16	0° \overline{VII}				-3548 Oct 30 j 10:10	0° \overline{VII}	
	-3553 Dec 11 j 21:45	0° \overline{VIII}		morning rise		-3548 Nov 14 j 07:21	11° \overline{VII} 20'59	
	-3552 Jan 27 j 04:44	0° \overline{IX}		desc. node		-3548 Nov 23 j 02:30	18° \overline{VII} 06'47	
asc. node	-3552 Feb 11 j 22:50	10° \overline{IX} 08'01				-3548 Dec 08 j 11:09	0° \overline{VIII}	
	-3552 Mar 14 j 01:25	0° \overline{X}				-3547 Jan 15 j 23:41	0° \overline{IX}	

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3547 Feb 23 j 20:17	0°♎		direct	-3542 Mar 03 j 08:32	24°♊41'53	
	-3547 Apr 05 j 00:03	0°♊			-3542 Apr 03 j 01:47	0°♎	
	-3547 May 17 j 15:15	0°♋			-3542 Jun 04 j 00:55	0°♌	
	-3547 Jul 03 j 21:03	0°♍		desc. node	-3542 Jul 15 j 20:21	27°♍12'36	
	-3547 Sep 05 j 07:31	0°♎			-3542 Jul 19 j 20:35	0°♏	
retrograde	-3547 Oct 03 j 23:25	4°♎43'19			-3542 Aug 30 j 00:57	0°♐	
asc. node	-3547 Oct 03 j 21:22	4°♎43'19			-3542 Oct 08 j 03:03	0°♑	
	-3547 Oct 30 j 11:23	30°♑			-3542 Nov 15 j 14:16	0°♒	
min. Earth dist.	-3547 Nov 10 j 18:27	25°♑43'41	0.65515 AU		-3542 Dec 24 j 13:06	0°♓	
opposition	-3547 Nov 13 j 01:08	24°♑48'41	1°31'07	evening set	-3541 Jan 26 j 23:41	24°♓59'34	
greatest brilliancy	-3547 Nov 12 j 20:00	24°♑53'51	-1.4m		-3541 Feb 02 j 19:57	0°♊	
direct	-3547 Dec 22 j 12:06	15°♑22'36			-3541 Mar 17 j 00:00	0°♋	
	-3546 Feb 17 j 07:31	0°♌					
	-3546 Apr 16 j 22:14	0°♍		conjunction	-3541 Mar 25 j 21:54	6°♋09'38	0°-34'-51
	-3546 Jun 05 j 11:15	0°♎		minimum elong	-3541 Mar 25 j 23:37	6°♋12'34	0°34'54
	-3546 Jul 20 j 17:58	0°♌		max. Earth dist.	-3541 Apr 23 j 18:58	25°♋43'18	2.57587 AU
	-3546 Aug 31 j 23:37	0°♍			-3541 Apr 30 j 05:13	0°♎	
evening set	-3546 Sep 18 j 21:49	13°♍16'18		morning rise	-3541 May 18 j 04:04	11°♎48'57	
desc. node	-3546 Oct 10 j 23:47	29°♍59'44		asc. node	-3541 May 26 j 19:12	17°♎26'01	
	-3546 Oct 10 j 23:55	0°♎			-3541 Jun 15 j 07:50	0°♏	
max. Earth dist.	-3546 Oct 19 j 09:12	6°♎26'46	2.38897 AU		-3541 Aug 02 j 02:04	0°♐	
					-3541 Sep 20 j 19:55	0°♑	
conjunction	-3546 Nov 17 j 11:52	29°♎06'27	0°-26'-7		-3541 Nov 14 j 07:35	0°♒	
minimum elong	-3546 Nov 17 j 09:48	29°♎02'24	0°26'10	retrograde	-3540 Jan 30 j 04:26	24°♒15'41	
	-3546 Nov 18 j 15:11	0°♑		opposition	-3540 Mar 05 j 05:50	17°♒03'05	4°17'37
	-3546 Dec 26 j 18:48	0°♒		greatest brilliancy	-3540 Mar 07 j 01:28	16°♒24'31	-2.0m
morning rise	-3545 Jan 23 j 17:19	21°♒48'30		min. Earth dist.	-3540 Mar 13 j 12:46	14°♒08'01	0.51237 AU
	-3545 Feb 03 j 08:09	0°♓		direct	-3540 Apr 12 j 22:54	8°♒13'09	
	-3545 Mar 15 j 03:36	0°♊		desc. node	-3540 Jun 01 j 19:08	21°♒58'30	
	-3545 Apr 25 j 23:50	0°♋			-3540 Jun 17 j 03:30	0°♏	
	-3545 Jun 09 j 15:32	0°♌			-3540 Aug 03 j 04:15	0°♐	
	-3545 Jul 28 j 14:19	0°♍			-3540 Sep 13 j 12:53	0°♑	
asc. node	-3545 Aug 21 j 22:31	13°♍20'13			-3540 Oct 23 j 09:32	0°♒	
	-3545 Sep 27 j 16:30	0°♎			-3540 Dec 02 j 11:12	0°♓	
retrograde	-3545 Nov 07 j 15:56	8°♎35'34			-3539 Jan 12 j 17:34	0°♊	
	-3545 Dec 15 j 02:37	30°♏			-3539 Feb 24 j 17:27	0°♋	
opposition	-3545 Dec 17 j 06:58	29°♏08'05	3°46'42	evening set	-3539 Mar 19 j 02:21	15°♋07'31	
greatest brilliancy	-3545 Dec 17 j 11:14	29°♏03'50	-1.3m		-3539 Apr 10 j 12:23	0°♌	
min. Earth dist.	-3545 Dec 18 j 19:26	28°♏31'48	0.67020 AU	asc. node	-3539 Apr 12 j 17:25	1°♌27'09	
direct	-3544 Jan 27 j 07:04	19°♏11'13					
	-3544 Mar 14 j 09:57	0°♐		conjunction	-3539 May 08 j 22:26	18°♌31'41	0°14'52
	-3544 May 12 j 14:18	0°♎		minimum elong	-3539 May 08 j 21:50	18°♌30'43	0°14'54
	-3544 Jun 29 j 04:06	0°♌		behind sun begin	-3539 May 08 j 15:10	18°♌19'56	
	-3544 Aug 11 j 02:08	0°♍		behind sun end	-3539 May 09 j 04:29	18°♌41'28	
desc. node	-3544 Aug 27 j 21:35	12°♍22'10		max. Earth dist.	-3539 May 20 j 01:12	25°♌41'46	2.65040 AU
	-3544 Sep 20 j 05:31	0°♎			-3539 May 26 j 17:58	0°♏	
	-3544 Oct 28 j 19:36	0°♏		morning rise	-3539 Jun 25 j 10:29	18°♏57'35	
evening set	-3544 Nov 21 j 08:14	18°♏31'45			-3539 Jul 12 j 19:40	0°♐	
	-3544 Dec 05 j 22:02	0°♑			-3539 Aug 29 j 05:31	0°♑	
	-3543 Jan 13 j 11:53	0°♒			-3539 Oct 15 j 23:10	0°♒	
					-3539 Dec 03 j 20:36	0°♓	
conjunction	-3543 Jan 26 j 01:00	9°♓34'16	-1°-7'-22		-3538 Jan 26 j 03:58	0°♔	
minimum elong	-3543 Jan 26 j 01:16	9°♓34'46	1°07'31	retrograde	-3538 Apr 06 j 23:01	22°♔24'02	
	-3543 Feb 22 j 09:02	0°♊		desc. node	-3538 Apr 19 j 20:43	21°♔21'27	
max. Earth dist.	-3543 Mar 15 j 05:20	15°♊09'05	2.45492 AU	opposition	-3538 May 07 j 18:03	17°♔10'33	-1°-17'-4
morning rise	-3543 Mar 30 j 10:48	25°♊58'35		greatest brilliancy	-3538 May 08 j 01:23	17°♔05'26	-2.8m
	-3543 Apr 05 j 04:27	0°♋		min. Earth dist.	-3538 May 12 j 12:30	15°♔50'48	0.39234 AU
	-3543 May 19 j 06:50	0°♌		direct	-3538 Jun 09 j 00:04	11°♔22'09	
	-3543 Jul 04 j 22:45	0°♍			-3538 Aug 06 j 10:04	0°♑	
asc. node	-3543 Jul 08 j 21:36	2°♍27'30			-3538 Sep 24 j 07:38	0°♒	
	-3543 Aug 24 j 00:54	0°♎			-3538 Nov 07 j 14:53	0°♓	
	-3543 Oct 21 j 22:27	0°♎			-3538 Dec 21 j 13:56	0°♊	
retrograde	-3543 Dec 14 j 04:44	13°♎14'45			-3537 Feb 04 j 10:30	0°♋	
opposition	-3542 Jan 21 j 06:43	4°♎37'35	4°59'02	asc. node	-3537 Feb 28 j 14:37	15°♋50'39	
greatest brilliancy	-3542 Jan 22 j 10:06	4°♎11'13	-1.4m		-3537 Mar 22 j 11:11	0°♌	
min. Earth dist.	-3542 Jan 26 j 14:47	2°♎34'20	0.62106 AU	evening set	-3537 Apr 30 j 07:51	24°♌52'51	
	-3542 Feb 02 j 15:03	30°♏			-3537 May 08 j 08:43	0°♍	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 37

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

max. Earth dist.	-3537 Jun 12 j 17:26	22°♄30'54	2.67127 AU		-3532 Mar 04 j 00:56	0°♄	
					-3532 Apr 13 j 12:58	0°♁	
conjunction	-3537 Jun 16 j 15:23	25°♄00'40	0°53'30		-3532 May 26 j 23:29	0°♂	
minimum elong	-3537 Jun 16 j 14:07	24°♄58'39	0°53'37		-3532 Jul 16 j 04:54	0°♂	
	-3537 Jun 24 j 10:56	0°♂		retrograde	-3532 Sep 20 j 05:06	20°♂53'47	
morning rise	-3537 Jul 31 j 21:05	24°♂03'17		asc. node	-3532 Oct 20 j 13:16	14°♂42'31	
	-3537 Aug 10 j 01:04	0°♄		min. Earth dist.	-3532 Oct 26 j 09:43	12°♂26'08	0.63212 AU
	-3537 Sep 24 j 17:03	0°♂		opposition	-3532 Oct 30 j 03:11	10°♂56'24	0°22'52
	-3537 Nov 08 j 09:08	0°♂		greatest brilliancy	-3532 Oct 30 j 01:05	10°♂58'30	-1.5m
	-3537 Dec 22 j 06:58	0°♂		direct	-3532 Dec 07 j 15:12	1°♂50'12	
	-3536 Feb 03 j 23:25	0°♂			-3531 Mar 02 j 20:17	0°♄	
desc. node	-3536 Mar 06 j 22:21	21°♂32'01			-3531 Apr 25 j 16:38	0°♂	
	-3536 Mar 19 j 22:07	0°♄			-3531 Jun 13 j 02:12	0°♄	
	-3536 May 12 j 04:19	0°♄			-3531 Jul 28 j 01:03	0°♂	
retrograde	-3536 Jun 21 j 11:58	9°♄57'03		evening set	-3531 Aug 29 j 03:20	22°♂39'22	
min. Earth dist.	-3536 Jul 18 j 05:26	5°♄20'47	0.41092 AU		-3531 Sep 08 j 06:00	0°♂	
greatest brilliancy	-3536 Jul 23 j 06:34	3°♄47'43	-2.6m	max. Earth dist.	-3531 Sep 15 j 10:05	5°♂15'48	2.43327 AU
opposition	-3536 Jul 25 j 05:01	3°♄11'39	-6°-32'-35		-3531 Oct 18 j 08:37	0°♂	
	-3536 Aug 05 j 12:20	30°♂♄					
direct	-3536 Aug 24 j 23:58	27°♄31'40		conjunction	-3531 Oct 23 j 15:04	4°♂01'55	0°02'57
	-3536 Sep 13 j 23:27	0°♄		minimum elong	-3531 Oct 23 j 15:17	4°♂02'20	0°02'56
	-3536 Nov 20 j 23:57	0°♁		behind sun begin	-3531 Oct 22 j 14:38	3°♂15'05	
	-3535 Jan 11 j 01:59	0°♂		behind sun end	-3531 Oct 24 j 15:57	4°♂49'37	
asc. node	-3535 Jan 15 j 12:29	2°♂41'27		desc. node	-3531 Oct 27 j 18:06	7°♂12'06	
	-3535 Mar 01 j 01:58	0°♂			-3531 Nov 26 j 02:48	0°♂	
	-3535 Apr 18 j 11:48	0°♄		morning rise	-3531 Dec 25 j 14:49	23°♂08'22	
	-3535 Jun 05 j 04:29	0°♂			-3530 Jan 03 j 08:46	0°♄	
evening set	-3535 Jun 06 j 18:55	1°♂01'07			-3530 Feb 10 j 23:35	0°♄	
max. Earth dist.	-3535 Jul 06 j 04:08	19°♂53'54	2.63805 AU		-3530 Mar 22 j 20:15	0°♁	
	-3535 Jul 21 j 15:31	0°♄			-3530 May 03 j 20:05	0°♂	
					-3530 Jun 18 j 01:17	0°♂	
conjunction	-3535 Jul 23 j 07:15	1°♄05'15	1°10'47		-3530 Aug 08 j 05:40	0°♄	
minimum elong	-3535 Jul 23 j 07:02	1°♄04'54	1°10'56	asc. node	-3530 Sep 07 j 13:29	14°♄26'05	
	-3535 Sep 04 j 11:24	0°♂		retrograde	-3530 Oct 25 j 03:10	25°♄45'33	
morning rise	-3535 Sep 07 j 08:40	1°♂58'21		opposition	-3530 Dec 04 j 01:22	16°♄04'38	3°00'53
	-3535 Oct 17 j 13:57	0°♂		greatest brilliancy	-3530 Dec 03 j 23:41	16°♄06'19	-1.3m
	-3535 Nov 28 j 04:14	0°♂		min. Earth dist.	-3530 Dec 04 j 01:59	16°♄04'00	0.67192 AU
	-3534 Jan 07 j 16:01	0°♂		direct	-3529 Jan 13 j 14:23	6°♄16'34	
desc. node	-3534 Jan 22 j 21:10	11°♂23'25			-3529 Mar 30 j 12:59	0°♂	
	-3534 Feb 16 j 17:09	0°♄			-3529 May 22 j 20:22	0°♄	
	-3534 Mar 29 j 09:03	0°♄			-3529 Jul 08 j 05:11	0°♂	
	-3534 May 11 j 18:06	0°♁			-3529 Aug 19 j 18:27	0°♂	
	-3534 Jul 04 j 18:13	0°♂		desc. node	-3529 Sep 14 j 15:08	19°♂12'27	
retrograde	-3534 Aug 12 j 22:18	9°♂12'19			-3529 Sep 28 j 19:37	0°♂	
min. Earth dist.	-3534 Sep 13 j 04:15	2°♂32'27	0.53437 AU	evening set	-3529 Oct 26 j 11:24	21°♂26'15	
greatest brilliancy	-3534 Sep 19 j 05:47	0°♂14'06	-1.9m		-3529 Nov 06 j 09:23	0°♂	
	-3534 Sep 19 j 20:33	30°♂♁			-3529 Dec 14 j 11:25	0°♄	
opposition	-3534 Sep 20 j 08:12	29°♁48'53	-3°-14'-7				
direct	-3534 Oct 25 j 13:08	22°♁00'43		conjunction	-3529 Dec 30 j 14:57	12°♄39'19	-1°-1'-25
asc. node	-3534 Dec 03 j 12:26	0°♂00'39		minimum elong	-3529 Dec 30 j 12:30	12°♄34'31	1°01'33
	-3534 Dec 03 j 11:42	0°♂			-3528 Jan 22 j 00:04	0°♄	
	-3533 Feb 04 j 15:40	0°♂		max. Earth dist.	-3528 Feb 15 j 11:40	18°♄36'11	2.40345 AU
	-3533 Mar 29 j 01:20	0°♄			-3528 Mar 01 j 19:15	0°♁	
	-3533 May 17 j 07:48	0°♂		morning rise	-3528 Mar 06 j 19:05	3°♁40'18	
	-3533 Jul 03 j 05:56	0°♄			-3528 Apr 12 j 13:06	0°♂	
evening set	-3533 Jul 16 j 00:35	8°♄26'06			-3528 May 26 j 17:25	0°♂	
max. Earth dist.	-3533 Aug 03 j 09:10	20°♄46'30	2.55407 AU		-3528 Jul 12 j 22:05	0°♄	
	-3533 Aug 16 j 20:30	0°♂		asc. node	-3528 Jul 25 j 13:15	7°♄37'46	
					-3528 Sep 03 j 01:47	0°♂	
conjunction	-3533 Sep 02 j 17:18	11°♂45'29	0°57'08	retrograde	-3528 Nov 28 j 22:08	29°♂32'18	
minimum elong	-3533 Sep 02 j 18:52	11°♂48'14	0°57'12	opposition	-3527 Jan 06 j 18:02	20°♂32'20	4°39'54
	-3533 Sep 28 j 06:12	0°♂		greatest brilliancy	-3527 Jan 07 j 11:34	20°♂15'10	-1.3m
morning rise	-3533 Oct 23 j 23:28	18°♂52'59		min. Earth dist.	-3527 Jan 10 j 14:40	19°♂01'39	0.64797 AU
	-3533 Nov 07 j 20:01	0°♂		direct	-3527 Feb 17 j 00:06	10°♂31'09	
desc. node	-3533 Dec 10 j 19:39	25°♂07'36			-3527 Apr 23 j 10:12	0°♄	
	-3533 Dec 17 j 03:31	0°♂			-3527 Jun 14 j 13:46	0°♂	
	-3532 Jan 24 j 22:14	0°♄			-3527 Jul 28 j 18:08	0°♂	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 38

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

desc. node	-3527 Aug 01 j 13:23	2°♎43'26		minimum elong	-3522 Jun 01 j 22:39	11°♏17'40	0°40'42
	-3527 Sep 07 j 08:48	0°♎		max. Earth dist.	-3522 Jun 03 j 17:33	12°♏26'05	2.66952 AU
	-3527 Oct 16 j 04:04	0°♎			-3522 Jul 01 j 06:34	0°♐	
	-3527 Nov 23 j 10:13	0°♏		morning rise	-3522 Jul 17 j 18:28	10°♐32'21	
	-3526 Jan 01 j 04:08	0°♏			-3522 Aug 17 j 02:05	0°♑	
evening set	-3526 Jan 02 j 12:58	1°♏02'38			-3522 Oct 02 j 08:19	0°♑	
	-3526 Feb 10 j 05:47	0°♑			-3522 Nov 17 j 02:54	0°♑	
					-3521 Jan 01 j 22:02	0°♑	
conjunction	-3526 Mar 05 j 02:10	16°♑31'03	0°-52'-28		-3521 Feb 18 j 02:07	0°♒	
minimum elong	-3526 Mar 05 j 04:26	16°♑35'06	0°52'34	desc. node	-3521 Mar 24 j 13:58	19°♒55'59	
	-3526 Mar 24 j 04:59	0°♒			-3521 Apr 14 j 09:17	0°♒	
max. Earth dist.	-3526 Apr 10 j 22:02	12°♒13'33	2.53300 AU	retrograde	-3521 May 26 j 06:36	10°♒05'04	
morning rise	-3526 Apr 30 j 19:52	25°♒40'58		min. Earth dist.	-3521 Jun 23 j 01:01	5°♒33'33	0.38133 AU
	-3526 May 07 j 07:19	0°♓		opposition	-3521 Jun 26 j 12:01	4°♒36'56	-5°-56'-5
asc. node	-3526 Jun 12 j 11:36	23°♓36'21		greatest brilliancy	-3521 Jun 25 j 13:36	4°♒52'16	-2.8m
	-3526 Jun 22 j 12:05	0°♓			-3521 Jul 18 j 08:06	30°♒♎	
	-3526 Aug 09 j 20:20	0°♐		direct	-3521 Jul 26 j 06:45	29°♒35'20	
	-3526 Sep 30 j 12:30	0°♑			-3521 Aug 03 j 06:27	0°♒	
	-3526 Dec 03 j 14:34	0°♑			-3521 Oct 16 j 13:43	0°♓	
retrograde	-3525 Jan 10 j 02:38	7°♑09'53			-3521 Dec 05 j 02:06	0°♑	
	-3525 Feb 13 j 16:21	30°♒♑			-3520 Jan 21 j 13:20	0°♒	
opposition	-3525 Feb 15 j 13:34	29°♑18'35	4°54'33	asc. node	-3520 Feb 02 j 04:44	7°♒22'29	
greatest brilliancy	-3525 Feb 17 j 06:38	28°♑40'36	-1.7m		-3520 Mar 09 j 00:17	0°♓	
min. Earth dist.	-3525 Feb 22 j 23:16	26°♑34'37	0.56109 AU		-3520 Apr 25 j 16:07	0°♓	
direct	-3525 Mar 27 j 14:52	19°♑50'35		evening set	-3520 May 22 j 23:59	17°♓15'16	
	-3525 May 09 j 10:26	0°♑			-3520 Jun 12 j 01:14	0°♐	
desc. node	-3525 Jun 19 j 13:36	21°♑39'58		max. Earth dist.	-3520 Jun 26 j 12:07	9°♐15'08	2.65733 AU
	-3525 Jul 02 j 19:32	0°♑					
	-3525 Aug 15 j 02:45	0°♑		conjunction	-3520 Jul 08 j 12:33	16°♐59'53	1°07'10
	-3525 Sep 24 j 03:35	0°♒		minimum elong	-3520 Jul 08 j 11:45	16°♐58'36	1°07'19
	-3525 Nov 02 j 05:31	0°♒			-3520 Jul 28 j 12:09	0°♑	
	-3525 Dec 11 j 16:49	0°♓		morning rise	-3520 Aug 22 j 20:30	16°♑44'42	
	-3524 Jan 21 j 11:02	0°♑			-3520 Sep 11 j 14:06	0°♑	
evening set	-3524 Feb 29 j 10:27	27°♑30'50			-3520 Oct 25 j 04:10	0°♑	
	-3524 Mar 04 j 00:56	0°♒			-3520 Dec 06 j 10:33	0°♑	
	-3524 Apr 17 j 12:45	0°♓			-3519 Jan 16 j 18:07	0°♒	
conjunction	-3524 Apr 22 j 13:46	3°♓19'38	0°-3'-56	desc. node	-3519 Feb 08 j 14:24	16°♒42'49	
minimum elong	-3524 Apr 22 j 13:57	3°♓19'56	0°03'57		-3519 Feb 26 j 19:42	0°♒	
behind sun begin	-3524 Apr 21 j 17:18	2°♓45'56			-3519 Apr 10 j 02:06	0°♓	
behind sun end	-3524 Apr 23 j 10:36	3°♓53'54			-3519 May 27 j 20:42	0°♑	
asc. node	-3524 Apr 29 j 08:36	7°♓46'58		retrograde	-3519 Jul 25 j 19:32	19°♑12'45	
max. Earth dist.	-3524 May 10 j 03:54	14°♓50'07	2.62757 AU	min. Earth dist.	-3519 Aug 23 j 21:11	13°♑25'34	0.48509 AU
	-3524 Jun 02 j 15:24	0°♓		greatest brilliancy	-3519 Aug 30 j 04:24	11°♑09'50	-2.2m
morning rise	-3524 Jun 10 j 20:00	5°♓14'50		opposition	-3519 Aug 31 j 21:52	10°♑32'21	-4°-47'-57
	-3524 Jul 19 j 20:43	0°♐		direct	-3519 Oct 04 j 10:27	3°♑29'17	
	-3524 Sep 05 j 21:43	0°♑		asc. node	-3519 Dec 20 j 03:37	28°♑39'45	
	-3524 Oct 25 j 05:27	0°♑			-3519 Dec 22 j 18:06	0°♒	
	-3524 Dec 17 j 10:00	0°♑			-3518 Feb 14 j 17:14	0°♓	
retrograde	-3523 Mar 08 j 03:03	26°♑49'02			-3518 Apr 06 j 00:27	0°♓	
opposition	-3523 Apr 09 j 16:10	20°♑50'06	1°43'29	evening set	-3518 May 24 j 12:08	0°♐	
greatest brilliancy	-3523 Apr 10 j 12:15	20°♑34'28	-2.5m		-3518 Jun 30 j 09:32	23°♐36'17	
min. Earth dist.	-3523 Apr 17 j 10:18	18°♑26'11	0.43312 AU	max. Earth dist.	-3518 Jul 10 j 04:20	0°♑	
desc. node	-3523 May 06 j 13:31	14°♑09'56			-3518 Jul 22 j 16:03	8°♑15'04	2.59251 AU
direct	-3523 May 14 j 20:35	13°♑41'12		conjunction	-3518 Aug 16 j 19:41	25°♑11'47	1°06'50
	-3523 Jul 07 j 16:56	0°♑		minimum elong	-3518 Aug 16 j 20:36	25°♑13'21	1°06'56
	-3523 Aug 25 j 10:36	0°♒			-3518 Aug 23 j 19:57	0°♑	
	-3523 Oct 07 j 03:05	0°♒		morning rise	-3518 Oct 04 j 08:28	29°♑12'07	
	-3523 Nov 17 j 21:48	0°♓			-3518 Oct 05 j 11:06	0°♑	
	-3523 Dec 30 j 09:32	0°♑			-3518 Nov 15 j 08:53	0°♑	
	-3522 Feb 12 j 07:01	0°♒			-3518 Dec 25 j 01:19	0°♒	
asc. node	-3522 Mar 17 j 06:24	21°♒52'23		desc. node	-3518 Dec 27 j 12:55	1°♒53'51	
	-3522 Mar 29 j 16:52	0°♓			-3517 Feb 02 j 04:43	0°♒	
evening set	-3522 Apr 14 j 15:26	10°♓20'03			-3517 Mar 13 j 16:36	0°♓	
	-3522 May 15 j 06:12	0°♓			-3517 Apr 23 j 18:45	0°♑	
					-3517 Jun 07 j 17:58	0°♒	
conjunction	-3522 Jun 01 j 23:53	11°♓19'39	0°40'37		-3517 Aug 05 j 18:17	0°♓	

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

retrograde	-3517 Sep 06 j 20:10	6°Υ07'02		desc. node	-3512 Aug 18 j 07:27	8°♎57'43	
	-3517 Oct 06 j 18:09	30°♊			-3512 Sep 15 j 07:52	0°♊	
min. Earth dist.	-3517 Oct 11 j 05:56	28°♊16'30	0.60011 AU		-3512 Oct 23 j 23:43	0°♊	
opposition	-3517 Oct 16 j 09:37	26°♊13'42	0°-54'-22	greatest brilliancy	-3512 Nov 06 j 10:21	10°♊34'16	1.2m
greatest brilliancy	-3517 Oct 16 j 03:53	26°♊19'24	-1.6m		-3512 Dec 01 j 02:57	0°♊	
asc. node	-3517 Nov 07 j 03:40	19°♊10'04		evening set	-3512 Dec 06 j 18:29	4°♊25'42	
direct	-3517 Nov 22 j 18:07	17°♊32'35			-3511 Jan 08 j 17:25	0°♊	
	-3516 Jan 12 j 23:38	0°Υ		conjunction	-3511 Feb 09 j 13:12	24°♊01'48	-1°-4'-40
	-3516 Mar 13 j 08:51	0°♊		minimum elong	-3511 Feb 09 j 14:44	24°♊04'37	1°04'48
	-3516 May 03 j 18:24	0°♊			-3511 Feb 17 j 15:03	0°♊	
	-3516 Jun 20 j 10:14	0°♊		max. Earth dist.	-3511 Mar 26 j 07:25	26°♊24'21	2.48355 AU
evening set	-3516 Aug 04 j 04:23	0°♊			-3511 Mar 31 j 10:21	0°♊	
max. Earth dist.	-3516 Aug 10 j 11:03	4°♊21'18		morning rise	-3511 Apr 11 j 13:01	7°♊43'05	
	-3516 Aug 25 j 13:41	14°♊59'09	2.48260 AU		-3511 May 14 j 11:13	0°Υ	
	-3516 Sep 15 j 10:14	0°♎		asc. node	-3511 Jun 29 j 02:19	29°Υ30'41	
conjunction	-3516 Oct 01 j 14:56	11°♎55'02	0°28'47		-3511 Jun 29 j 20:57	0°♊	
minimum elong	-3516 Oct 01 j 16:29	11°♎57'55	0°28'48		-3511 Aug 18 j 03:04	0°♊	
	-3516 Oct 25 j 16:20	0°♊			-3511 Oct 12 j 05:27	0°♊	
desc. node	-3516 Nov 13 j 10:57	14°♊22'38		retrograde	-3511 Dec 23 j 12:16	21°♊53'48	
morning rise	-3516 Nov 28 j 10:07	25°♊57'34		opposition	-3510 Jan 30 j 01:48	13°♊31'22	5°02'55
	-3516 Dec 03 j 14:47	0°♊		greatest brilliancy	-3510 Jan 31 j 10:40	13°♊00'03	-1.5m
	-3515 Jan 11 j 00:35	0°♊		min. Earth dist.	-3510 Feb 05 j 04:34	11°♊11'43	0.60212 AU
	-3515 Feb 18 j 18:31	0°♊		direct	-3510 Mar 11 j 21:21	3°♊42'12	
	-3515 Mar 30 j 18:34	0°♊			-3510 May 27 j 04:11	0°♊	
	-3515 May 12 j 01:41	0°♊		desc. node	-3510 Jul 06 j 05:42	24°♊53'10	
	-3515 Jun 27 j 06:47	0°Υ			-3510 Jul 13 j 18:42	0°♎	
	-3515 Aug 22 j 06:38	0°♊			-3510 Aug 24 j 12:49	0°♊	
asc. node	-3515 Sep 24 j 04:30	10°♊55'53			-3510 Oct 02 j 21:30	0°♊	
retrograde	-3515 Oct 11 j 17:49	12°♊46'58			-3510 Nov 10 j 12:49	0°♊	
min. Earth dist.	-3515 Nov 19 j 07:53	3°♊31'28	0.66386 AU		-3510 Dec 19 j 15:01	0°♊	
opposition	-3515 Nov 20 j 19:00	2°♊56'09	2°06'35		-3509 Jan 29 j 00:46	0°♊	
greatest brilliancy	-3515 Nov 20 j 14:05	3°♊01'06	-1.3m	evening set	-3509 Feb 08 j 17:09	7°♊43'11	
	-3515 Nov 28 j 05:47	30°♊			-3509 Mar 12 j 06:59	0°♊	
direct	-3515 Dec 30 j 16:11	23°Υ21'09		conjunction	-3509 Apr 05 j 19:00	16°♊46'06	0°-23'-40
	-3514 Feb 04 j 17:30	0°♊		minimum elong	-3509 Apr 05 j 20:10	16°♊48'03	0°23'41
	-3514 Apr 10 j 15:08	0°♊			-3509 Apr 25 j 13:21	0°Υ	
	-3514 May 31 j 06:00	0°♊		max. Earth dist.	-3509 Apr 30 j 10:34	3°Υ14'01	2.59632 AU
	-3514 Jul 15 j 21:31	0°♊		asc. node	-3509 May 17 j 01:10	14°Υ07'49	
	-3514 Aug 27 j 06:02	0°♎		morning rise	-3509 May 27 j 10:48	20°Υ53'05	
evening set	-3514 Oct 01 j 16:54	26°♎30'04			-3509 Jun 10 j 14:39	0°♊	
desc. node	-3514 Oct 01 j 09:40	26°♎16'17			-3509 Jul 28 j 02:32	0°♊	
	-3514 Oct 06 j 06:48	0°♊			-3509 Sep 15 j 01:58	0°♊	
	-3514 Nov 13 j 21:20	0°♊			-3509 Nov 06 j 00:47	0°♊	
max. Earth dist.	-3514 Nov 28 j 14:43	11°♊35'11	2.37536 AU		-3508 Jan 10 j 21:50	0°♎	
conjunction	-3514 Dec 02 j 16:06	14°♊46'59	0°-41'-34	retrograde	-3508 Feb 11 j 19:16	5°♎24'13	
minimum elong	-3514 Dec 02 j 13:03	14°♊40'58	0°41'38		-3508 Mar 12 j 19:41	30°♊	
	-3514 Dec 21 j 23:47	0°♊		opposition	-3508 Mar 17 j 00:27	28°♊35'55	3°37'42
	-3513 Jan 29 j 12:03	0°♊		greatest brilliancy	-3508 Mar 18 j 16:23	28°♊01'48	-2.2m
morning rise	-3513 Feb 09 j 00:09	8°♊02'33		min. Earth dist.	-3508 Mar 25 j 11:47	25°♊43'26	0.48387 AU
	-3513 Mar 10 j 06:20	0°♊		direct	-3508 Apr 23 j 16:14	20°♊15'38	
	-3513 Apr 21 j 00:11	0°♊		desc. node	-3508 May 23 j 05:47	25°♊41'36	
	-3513 Jun 04 j 09:34	0°Υ			-3508 Jun 03 j 07:44	0°♎	
	-3513 Jul 22 j 11:27	0°♊			-3508 Jul 26 j 05:55	0°♊	
asc. node	-3513 Aug 12 j 03:52	11°♊53'05			-3508 Sep 07 j 00:07	0°♊	
	-3513 Sep 16 j 14:12	0°♊			-3508 Oct 17 j 12:47	0°♊	
retrograde	-3513 Nov 15 j 15:03	16°♊26'38			-3508 Nov 27 j 00:56	0°♊	
opposition	-3513 Dec 25 j 00:18	7°♊08'02	4°09'03		-3507 Jan 07 j 15:12	0°♊	
greatest brilliancy	-3513 Dec 25 j 08:53	6°♊59'33	-1.3m		-3507 Feb 19 j 20:54	0°♊	
min. Earth dist.	-3513 Dec 27 j 08:45	6°♊12'06	0.66511 AU	evening set	-3507 Mar 29 j 01:54	24°♊54'02	
	-3512 Jan 14 j 03:34	30°♊		asc. node	-3507 Apr 02 j 22:47	28°♊06'27	
direct	-3512 Feb 04 j 03:53	27°♊08'12			-3507 Apr 05 j 19:56	0°Υ	
	-3512 Feb 26 j 17:18	0°♊		conjunction	-3507 May 17 j 21:29	27°Υ16'39	0°24'59
	-3512 May 05 j 21:49	0°♊		minimum elong	-3507 May 17 j 20:33	27°Υ15'10	0°25'01
	-3512 Jun 23 j 16:58	0°♊			-3507 May 22 j 03:19	0°♊	
	-3512 Aug 06 j 00:34	0°♎					

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 40

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

max. Earth dist.	-3507 May 25 j 14:01	2°♄12'32	2.65949 AU	opposition	-3502 Sep 30 j 08:32	10°♄12'29	-2°-20'-49
morning rise	-3507 Jul 03 j 15:34	27°♄08'03		greatest brilliancy	-3502 Sep 29 j 14:36	10°♄29'56	-1.8m
	-3507 Jul 08 j 03:39	0°♄		direct	-3502 Nov 05 j 09:02	2°♄03'02	
	-3507 Aug 24 j 07:18	0°♄		asc. node	-3502 Nov 23 j 18:31	4°♄03'02	
	-3507 Oct 10 j 09:39	0°♄			-3501 Jan 28 j 03:23	0°♄	
	-3507 Nov 26 j 20:57	0°♄			-3501 Mar 23 j 11:33	0°♄	
	-3506 Jan 15 j 05:12	0°♄			-3501 May 12 j 09:30	0°♄	
	-3506 Mar 14 j 21:24	0°♄			-3501 Jun 28 j 13:46	0°♄	
desc. node	-3506 Apr 10 j 06:45	7°♄47'52		evening set	-3501 Jul 25 j 07:04	17°♄44'46	
retrograde	-3506 Apr 24 j 18:29	9°♄06'11		max. Earth dist.	-3501 Aug 11 j 02:04	29°♄11'57	2.53027 AU
opposition	-3506 May 25 j 06:14	4°♄03'51	-3°-14'-39		-3501 Aug 12 j 05:57	0°♄	
greatest brilliancy	-3506 May 25 j 12:09	3°♄59'53	-2.9m				
min. Earth dist.	-3506 May 27 j 05:53	3°♄31'49	0.37991 AU	conjunction	-3501 Sep 12 j 23:26	22°♄19'23	0°48'42
	-3506 Jun 11 j 13:22	30°♄		minimum elong	-3501 Sep 13 j 01:12	22°♄22'33	0°48'46
direct	-3506 Jun 25 j 02:04	28°♄48'21			-3501 Sep 23 j 14:49	0°♄	
	-3506 Jul 08 j 11:41	0°♄			-3501 Nov 03 j 02:07	0°♄	
	-3506 Sep 14 j 06:36	0°♄		morning rise	-3501 Nov 05 j 05:04	1°♄36'16	
	-3506 Oct 31 j 09:23	0°♄		desc. node	-3501 Dec 01 j 05:49	21°♄29'22	
	-3506 Dec 15 j 14:39	0°♄			-3501 Dec 12 j 06:25	0°♄	
	-3505 Jan 30 j 03:37	0°♄			-3500 Jan 19 j 21:25	0°♄	
asc. node	-3505 Feb 18 j 20:09	12°♄47'30			-3500 Feb 27 j 19:51	0°♄	
	-3505 Mar 17 j 14:02	0°♄			-3500 Apr 08 j 01:34	0°♄	
	-3505 May 03 j 16:56	0°♄			-3500 May 20 j 21:35	0°♄	
evening set	-3505 May 09 j 01:04	3°♄23'16			-3500 Jul 07 j 23:34	0°♄	
max. Earth dist.	-3505 Jun 18 j 01:53	28°♄51'00	2.66856 AU	retrograde	-3500 Sep 28 j 05:04	29°♄22'46	
	-3505 Jun 19 j 21:05	0°♄		asc. node	-3500 Oct 10 j 18:29	28°♄17'36	
				min. Earth dist.	-3500 Nov 04 j 07:03	20°♄36'50	0.64603 AU
conjunction	-3505 Jun 24 j 23:17	3°♄15'18	0°59'33	opposition	-3500 Nov 07 j 05:22	19°♄26'05	1°03'45
minimum elong	-3505 Jun 24 j 22:07	3°♄13'26	0°59'40	greatest brilliancy	-3500 Nov 07 j 00:49	19°♄30'40	-1.4m
	-3505 Aug 05 j 09:51	0°♄		direct	-3500 Dec 16 j 06:10	10°♄08'20	
morning rise	-3505 Aug 09 j 02:38	2°♄24'51			-3499 Feb 22 j 16:29	0°♄	
	-3505 Sep 19 j 20:09	0°♄			-3499 Apr 20 j 00:12	0°♄	
	-3505 Nov 03 j 01:38	0°♄			-3499 Jun 08 j 02:13	0°♄	
	-3505 Dec 16 j 06:33	0°♄			-3499 Jul 23 j 06:51	0°♄	
	-3504 Jan 27 j 20:58	0°♄			-3499 Sep 03 j 13:24	0°♄	
desc. node	-3504 Feb 26 j 06:39	20°♄38'04		evening set	-3499 Sep 09 j 14:40	4°♄26'26	
	-3504 Mar 10 j 19:57	0°♄		max. Earth dist.	-3499 Oct 01 j 15:47	20°♄53'17	2.40730 AU
	-3504 Apr 26 j 02:46	0°♄			-3499 Oct 13 j 15:36	0°♄	
retrograde	-3504 Jul 04 j 21:27	25°♄34'23		desc. node	-3499 Oct 18 j 03:15	3°♄26'00	
min. Earth dist.	-3504 Aug 01 j 03:31	20°♄37'43	0.43553 AU				
greatest brilliancy	-3504 Aug 06 j 22:56	18°♄43'20	-2.5m	conjunction	-3499 Nov 06 j 07:01	18°♄14'15	0°-13'-31
opposition	-3504 Aug 09 j 00:37	18°♄02'16	-6°-8'-11	minimum elong	-3499 Nov 06 j 05:58	18°♄12'11	0°13'34
direct	-3504 Sep 09 j 16:31	11°♄52'19		behind sun begin	-3499 Nov 05 j 15:11	17°♄43'29	
	-3504 Nov 10 j 04:15	0°♄		behind sun end	-3499 Nov 06 j 20:44	18°♄40'54	
	-3503 Jan 04 j 08:36	0°♄			-3499 Nov 21 j 08:41	0°♄	
asc. node	-3503 Jan 05 j 19:02	0°♄50'12			-3499 Dec 29 j 13:15	0°♄	
	-3503 Feb 23 j 15:13	0°♄		morning rise	-3498 Jan 10 j 21:52	9°♄40'49	
	-3503 Apr 13 j 14:21	0°♄			-3498 Feb 06 j 02:37	0°♄	
	-3503 May 31 j 13:02	0°♄			-3498 Mar 17 j 21:31	0°♄	
evening set	-3503 Jun 15 j 06:41	9°♄23'10			-3498 Apr 28 j 17:23	0°♄	
max. Earth dist.	-3503 Jul 12 j 00:22	26°♄40'44	2.62409 AU		-3498 Jun 12 j 12:04	0°♄	
	-3503 Jul 17 j 02:01	0°♄			-3498 Aug 01 j 02:21	0°♄	
				asc. node	-3498 Aug 28 j 19:25	14°♄31'44	
conjunction	-3503 Jul 31 j 23:23	9°♄50'26	1°10'48		-3498 Oct 07 j 15:07	0°♄	
minimum elong	-3503 Jul 31 j 23:34	9°♄50'44	1°10'57	retrograde	-3498 Nov 01 j 21:48	3°♄35'29	
	-3503 Aug 30 j 20:32	0°♄			-3498 Nov 25 j 06:46	30°♄	
morning rise	-3503 Sep 16 j 16:51	11°♄37'23		opposition	-3498 Dec 11 j 16:04	24°♄01'34	3°28'34
	-3503 Oct 12 j 19:03	0°♄		greatest brilliancy	-3498 Dec 11 j 17:23	24°♄00'15	-1.3m
	-3503 Nov 23 j 02:55	0°♄		min. Earth dist.	-3498 Dec 12 j 12:21	23°♄41'17	0.67224 AU
	-3502 Jan 02 j 06:49	0°♄		direct	-3497 Jan 21 j 11:19	14°♄08'04	
desc. node	-3502 Jan 13 j 06:58	8°♄19'02			-3497 Mar 21 j 16:43	0°♄	
	-3502 Feb 10 j 22:15	0°♄			-3497 May 16 j 23:16	0°♄	
	-3502 Mar 23 j 00:40	0°♄			-3497 Jul 03 j 01:26	0°♄	
	-3502 May 04 j 05:10	0°♄			-3497 Aug 14 j 20:50	0°♄	
	-3502 Jun 21 j 17:45	0°♄		desc. node	-3497 Sep 05 j 00:39	15°♄37'20	
retrograde	-3502 Aug 22 j 10:23	19°♄51'04			-3497 Sep 24 j 00:03	0°♄	
min. Earth dist.	-3502 Sep 23 j 20:52	12°♄43'42	0.55992 AU		-3497 Nov 01 j 14:23	0°♄	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 41

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

evening set	-3497 Nov 10 j 10:15	6°♌56'51			-3492 Jul 15 j 02:57	0°♐	
	-3497 Dec 09 j 16:23	0°♏			-3492 Aug 31 j 18:41	0°♑	
					-3492 Oct 19 j 02:38	0°♒	
conjunction	-3496 Jan 15 j 06:54	28°♏31'24	-1°-6'-34		-3492 Dec 08 j 10:55	0°♓	
minimum elong	-3496 Jan 15 j 05:57	28°♏29'35	1°06'43		-3491 Feb 05 j 09:53	0°♈	
	-3496 Jan 17 j 04:59	0°♉		retrograde	-3491 Mar 24 j 11:54	11°♈07'20	
	-3496 Feb 26 j 00:15	0°♊		opposition	-3491 Apr 24 j 23:02	5°♈35'54	0°08'17
max. Earth dist.	-3496 Mar 04 j 18:43	5°♊42'19	2.43134 AU	greatest brilliancy	-3491 Apr 10 j 19:37	9°♈16'19	-2.7m
morning rise	-3496 Mar 20 j 14:17	17°♊09'07		desc. node	-3491 Apr 26 j 23:02	5°♈00'46	
	-3496 Apr 07 j 17:28	0°♋		min. Earth dist.	-3491 May 01 j 09:45	3°♈43'09	0.40825 AU
	-3496 May 21 j 19:03	0°♌			-3491 May 17 j 17:18	30°♏♓	
	-3496 Jul 07 j 13:58	0°♍		direct	-3491 May 28 j 13:10	29°♏12'38	
asc. node	-3496 Jul 15 j 19:05	5°♍03'27			-3491 Jun 08 j 08:18	0°♎	
	-3496 Aug 27 j 07:32	0°♏			-3491 Aug 15 j 11:34	0°♐	
	-3496 Oct 29 j 10:07	0°♑			-3491 Sep 29 j 17:27	0°♒	
retrograde	-3496 Dec 07 j 13:18	7°♑45'30			-3491 Nov 11 j 16:07	0°♓	
	-3495 Jan 12 j 06:45	30°♒♐			-3491 Dec 24 j 20:49	0°♈	
opposition	-3495 Jan 14 j 23:29	28°♐57'37	4°52'17		-3490 Feb 07 j 05:14	0°♉	
greatest brilliancy	-3495 Jan 15 j 22:26	28°♐35'19	-1.4m	asc. node	-3490 Mar 07 j 12:20	18°♉40'12	
min. Earth dist.	-3495 Jan 19 j 15:30	27°♐08'47	0.63433 AU		-3490 Mar 24 j 22:11	0°♊	
direct	-3495 Feb 25 j 03:40	18°♐58'26		evening set	-3490 Apr 23 j 17:05	19°♊10'46	
	-3495 Apr 12 j 15:50	0°♑			-3490 May 10 j 15:18	0°♋	
	-3495 Jun 08 j 02:54	0°♒		max. Earth dist.	-3490 Jun 09 j 01:04	18°♋44'42	2.67156 AU
desc. node	-3495 Jul 22 j 23:23	29°♒49'24					
	-3495 Jul 23 j 05:24	0°♓		conjunction	-3490 Jun 10 j 10:22	19°♋37'45	0°48'28
	-3495 Sep 02 j 04:17	0°♈		minimum elong	-3490 Jun 10 j 09:05	19°♋35'42	0°48'33
	-3495 Oct 11 j 03:39	0°♉			-3490 Jun 26 j 16:30	0°♐	
	-3495 Nov 18 j 12:12	0°♊		morning rise	-3490 Jul 25 j 20:16	18°♐40'59	
	-3495 Dec 27 j 07:55	0°♋			-3490 Aug 12 j 09:14	0°♑	
evening set	-3494 Jan 16 j 16:02	15°♋21'22			-3490 Sep 27 j 07:31	0°♒	
	-3494 Feb 05 j 11:17	0°♌			-3490 Nov 11 j 10:52	0°♓	
					-3490 Dec 26 j 02:16	0°♈	
conjunction	-3494 Mar 17 j 04:59	28°♌24'39	0°-42'-44		-3489 Feb 08 j 23:34	0°♉	
minimum elong	-3494 Mar 17 j 07:02	28°♌28'14	0°42'49	desc. node	-3489 Mar 15 j 00:46	21°♌52'09	
	-3494 Mar 19 j 11:39	0°♍			-3489 Mar 28 j 12:06	0°♊	
max. Earth dist.	-3494 Apr 18 j 13:45	20°♍36'59	2.55748 AU	retrograde	-3489 Jun 11 j 04:56	27°♊41'18	
	-3494 May 02 j 14:14	0°♎		min. Earth dist.	-3489 Jul 08 j 00:36	23°♊13'48	0.39464 AU
morning rise	-3494 May 10 j 22:17	5°♎31'09		greatest brilliancy	-3489 Jul 12 j 03:27	22°♊02'02	-2.7m
asc. node	-3494 Jun 02 j 16:47	20°♎22'46		opposition	-3489 Jul 13 j 17:49	21°♊33'56	-6°-32'-17
	-3494 Jun 17 j 16:19	0°♏		direct	-3489 Aug 12 j 22:51	16°♊15'16	
	-3494 Aug 04 j 14:59	0°♐			-3489 Oct 03 j 01:05	0°♋	
	-3494 Sep 24 j 00:45	0°♑			-3489 Nov 27 j 09:34	0°♌	
	-3494 Nov 20 j 03:45	0°♒			-3488 Jan 15 j 14:15	0°♍	
retrograde	-3493 Jan 21 j 04:41	17°♒05'21		asc. node	-3488 Jan 23 j 09:33	4°♍50'21	
opposition	-3493 Feb 25 j 21:33	9°♒34'22	4°37'11		-3488 Mar 03 j 20:03	0°♎	
greatest brilliancy	-3493 Feb 27 j 16:49	8°♒55'12	-1.9m		-3488 Apr 20 j 21:17	0°♏	
min. Earth dist.	-3493 Mar 05 j 20:13	6°♒42'27	0.53485 AU	evening set	-3488 May 31 j 12:02	25°♏35'00	
direct	-3493 Apr 06 j 06:17	0°♒25'04			-3488 Jun 07 j 10:45	0°♐	
desc. node	-3493 Jun 09 j 22:19	21°♒33'19		max. Earth dist.	-3488 Jul 02 j 01:23	15°♐46'25	2.64773 AU
	-3493 Jun 24 j 12:55	0°♓					
	-3493 Aug 08 j 14:34	0°♈		conjunction	-3488 Jul 16 j 22:58	25°♐26'27	1°09'47
	-3493 Sep 18 j 07:45	0°♉		minimum elong	-3488 Jul 16 j 22:29	25°♐25'39	1°09'55
	-3493 Oct 27 j 19:02	0°♊			-3488 Jul 23 j 22:22	0°♑	
	-3493 Dec 06 j 13:00	0°♋		morning rise	-3488 Aug 31 j 14:26	25°♑43'58	
	-3492 Jan 16 j 12:37	0°♌			-3488 Sep 06 j 21:32	0°♒	
	-3492 Feb 28 j 06:29	0°♍			-3488 Oct 20 j 05:52	0°♓	
evening set	-3492 Mar 11 j 06:26	8°♍11'15			-3488 Dec 01 j 03:26	0°♈	
	-3492 Apr 12 j 21:02	0°♎			-3487 Jan 10 j 23:48	0°♉	
asc. node	-3492 Apr 19 j 15:05	4°♎26'46		desc. node	-3487 Jan 29 j 23:59	14°♌06'20	
					-3487 Feb 20 j 10:17	0°♊	
conjunction	-3492 May 02 j 01:27	12°♎34'37	0°07'09		-3487 Apr 02 j 15:04	0°♋	
minimum elong	-3492 May 02 j 01:09	12°♎34'07	0°07'11		-3487 May 17 j 05:38	0°♌	
behind sun begin	-3492 May 01 j 06:29	12°♎03'44			-3487 Jul 22 j 09:00	0°♍	
behind sun end	-3492 May 02 j 19:49	13°♎04'29		retrograde	-3487 Aug 05 j 10:44	1°♍21'31	
max. Earth dist.	-3492 May 15 j 23:43	21°♎36'39	2.64120 AU		-3487 Aug 19 j 00:34	30°♏♓	
	-3492 May 29 j 00:16	0°♏		min. Earth dist.	-3487 Sep 04 j 16:57	25°♏04'30	0.51259 AU
morning rise	-3492 Jun 19 j 06:34	13°♏35'43		greatest brilliancy	-3487 Sep 10 j 22:20	22°♏45'31	-2.0m

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 42

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

opposition	-3487 Sep 12 j 07:24	22° ≈ 14'33	-3°-54'-36	evening set	-3482 Oct 15 j 09:26	10° Δ 40'54	
direct	-3487 Oct 16 j 18:50	14° ≈ 45'24			-3482 Nov 09 j 03:15	0° ℳ	
asc. node	-3487 Dec 10 j 09:16	29° ≈ 08'12			-3482 Dec 17 j 05:25	0° ℵ	
	-3487 Dec 12 j 08:11	0° ℵ					
	-3486 Feb 08 j 08:57	0° Υ		conjunction	-3482 Dec 18 j 08:30	0° ℵ 53'15	0°-54'-19
	-3486 Mar 31 j 18:46	0° ℵ		minimum elong	-3482 Dec 18 j 05:23	0° ℵ 47'08	0°54'24
	-3486 May 19 j 17:15	0° Π		max. Earth dist.	-3481 Jan 22 j 18:00	28° ℵ 29'06	2.38458 AU
	-3486 Jul 05 j 13:46	0° ☿			-3481 Jan 24 j 17:12	0° ☿	
evening set	-3486 Jul 09 j 06:10	2° ☿ 25'08		morning rise	-3481 Feb 24 j 11:32	23° ☿ 20'12	
max. Earth dist.	-3486 Jul 29 j 07:43	15° ☿ 45'54	2.57217 AU		-3481 Mar 05 j 10:53	0° ≈	
	-3486 Aug 19 j 05:48	0° Ω			-3481 Apr 16 j 03:07	0° ℵ	
					-3481 May 30 j 07:35	0° Υ	
conjunction	-3486 Aug 26 j 07:10	4° Ω 52'38	1°01'58		-3481 Jul 16 j 17:59	0° ℵ	
minimum elong	-3486 Aug 26 j 08:29	4° Ω 54'54	1°02'05	asc. node	-3481 Aug 02 j 09:59	9° ℵ 53'52	
	-3486 Sep 30 j 18:57	0° ℳ			-3481 Sep 08 j 01:59	0° Π	
morning rise	-3486 Oct 15 j 04:43	10° ℳ 28'31		retrograde	-3481 Nov 23 j 18:26	24° Π 21'40	
	-3486 Nov 10 j 12:51	0° Δ		opposition	-3480 Jan 01 j 20:17	15° Π 12'57	4°28'05
desc. node	-3486 Dec 17 j 22:29	28° Δ 23'50		greatest brilliancy	-3480 Jan 02 j 09:42	14° Π 59'43	-1.3m
	-3486 Dec 20 j 00:37	0° ℳ		min. Earth dist.	-3480 Jan 05 j 00:40	13° Π 57'39	0.65683 AU
	-3485 Jan 27 j 22:57	0° ℵ		direct	-3480 Feb 12 j 01:25	5° Π 11'36	
	-3485 Mar 08 j 04:41	0° ☿			-3480 Apr 28 j 09:16	0° ☿	
	-3485 Apr 17 j 20:54	0° ≈			-3480 Jun 17 j 23:00	0° Ω	
	-3485 May 31 j 17:48	0° ℵ			-3480 Jul 31 j 19:12	0° ℳ	
	-3485 Jul 23 j 02:17	0° Υ		desc. node	-3480 Aug 08 j 15:54	5° ℳ 40'39	
retrograde	-3485 Sep 15 j 05:06	15° Υ 09'49			-3480 Sep 10 j 07:15	0° Δ	
min. Earth dist.	-3485 Oct 20 j 14:55	6° Υ 57'57	0.61885 AU		-3480 Oct 19 j 01:20	0° ℳ	
opposition	-3485 Oct 24 j 23:41	5° Υ 13'08	0°-8'-22		-3480 Nov 26 j 06:01	0° ℵ	
greatest brilliancy	-3485 Oct 24 j 22:52	5° Υ 13'57	-1.5m	evening set	-3480 Dec 22 j 03:01	20° ℵ 09'53	
asc. node	-3485 Oct 28 j 10:15	3° Υ 51'16			-3479 Jan 03 j 21:40	0° ☿	
	-3485 Nov 08 j 07:03	30° ℵ			-3479 Feb 12 j 20:31	0° ≈	
direct	-3485 Dec 01 j 23:28	26° ℵ 17'32					
	-3485 Dec 27 j 23:09	0° Υ		conjunction	-3479 Feb 23 j 05:58	7° ≈ 35'31	0°-58'-36
	-3484 Mar 06 j 17:28	0° ℵ		minimum elong	-3479 Feb 23 j 08:07	7° ≈ 39'26	0°58'43
	-3484 Apr 28 j 11:15	0° Π			-3479 Mar 26 j 16:39	0° ℵ	
	-3484 Jun 15 j 14:12	0° ☿		max. Earth dist.	-3479 Apr 04 j 16:51	6° ℵ 15'57	2.51162 AU
	-3484 Jul 30 j 12:17	0° Ω		morning rise	-3479 Apr 22 j 19:10	18° ℵ 39'15	
evening set	-3484 Aug 20 j 20:39	14° Ω 56'15			-3479 May 09 j 16:52	0° Υ	
max. Earth dist.	-3484 Sep 05 j 12:09	26° Ω 09'33	2.45544 AU	asc. node	-3479 Jun 19 j 09:00	26° Υ 28'30	
	-3484 Sep 10 j 18:57	0° ℳ			-3479 Jun 24 j 22:05	0° ℵ	
					-3479 Aug 12 j 13:22	0° Π	
conjunction	-3484 Oct 13 j 17:40	24° ℳ 29'23	0°14'41		-3479 Oct 04 j 08:05	0° ☿	
minimum elong	-3484 Oct 13 j 18:37	24° ℳ 31'10	0°14'41		-3479 Dec 21 j 00:01	0° Ω	
behind sun begin	-3484 Oct 13 j 07:55	24° ℳ 10'56		retrograde	-3478 Jan 02 j 07:33	0° Ω 52'45	
behind sun end	-3484 Oct 14 j 05:19	24° ℳ 51'23			-3478 Jan 14 j 01:34	30° ℵ	
	-3484 Oct 20 j 23:55	0° Δ		opposition	-3478 Feb 08 j 06:35	22° ☿ 46'33	5°00'24
desc. node	-3484 Nov 03 j 20:54	10° Δ 37'24		greatest brilliancy	-3478 Feb 09 j 20:16	22° ☿ 11'08	-1.6m
	-3484 Nov 28 j 20:26	0° ℳ		min. Earth dist.	-3478 Feb 15 j 02:41	20° ☿ 12'39	0.58056 AU
morning rise	-3484 Dec 13 j 09:23	11° ℳ 22'18		direct	-3478 Mar 20 j 16:50	13° ☿ 07'15	
greatest brilliancy	-3484 Dec 23 j 04:13	19° ℳ 02'24	1.2m		-3478 May 17 j 13:21	0° Ω	
	-3483 Jan 06 j 03:59	0° ℵ		desc. node	-3478 Jun 26 j 16:13	23° Ω 07'18	
	-3483 Feb 13 j 19:24	0° ☿			-3478 Jul 07 j 05:10	0° ℳ	
	-3483 Mar 25 j 16:19	0° ≈			-3478 Aug 18 j 18:42	0° Δ	
	-3483 May 06 j 17:10	0° ℵ			-3478 Sep 27 j 11:54	0° ℳ	
	-3483 Jun 21 j 04:43	0° Υ			-3478 Nov 05 j 08:25	0° ℵ	
	-3483 Aug 12 j 17:03	0° ℵ			-3478 Dec 14 j 14:28	0° ☿	
asc. node	-3483 Sep 14 j 10:17	14° ℵ 04'53			-3477 Jan 24 j 03:38	0° ≈	
retrograde	-3483 Oct 19 j 11:32	20° ℵ 43'40		evening set	-3477 Feb 20 j 19:06	19° ≈ 43'39	
opposition	-3483 Nov 28 j 11:05	10° ℵ 57'50	2°39'19		-3477 Mar 07 j 12:43	0° ℵ	
greatest brilliancy	-3483 Nov 28 j 07:32	11° ℵ 01'24	-1.3m				
min. Earth dist.	-3483 Nov 27 j 19:40	11° ℵ 13'21	0.66951 AU	conjunction	-3477 Apr 16 j 03:50	26° ℵ 52'19	0°-12'-11
direct	-3482 Jan 07 j 17:08	1° ℵ 15'10		minimum elong	-3477 Apr 16 j 04:25	26° ℵ 53'16	0°12'12
	-3482 Apr 03 j 17:02	0° Π		behind sun begin	-3477 Apr 15 j 14:30	26° ℵ 30'08	
	-3482 May 25 j 19:36	0° ☿		behind sun end	-3477 Apr 16 j 18:19	27° ℵ 16'24	
	-3482 Jul 10 j 22:06	0° Ω			-3477 Apr 20 j 20:54	0° Υ	
	-3482 Aug 22 j 10:42	0° ℳ		max. Earth dist.	-3477 May 06 j 17:36	10° Υ 26'51	2.61473 AU
desc. node	-3482 Sep 21 j 18:10	22° ℳ 33'25		asc. node	-3477 May 07 j 06:08	10° Υ 47'22	
	-3482 Oct 01 j 12:36	0° Δ		morning rise	-3477 Jun 05 j 09:23	29° Υ 39'56	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 43

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3477 Jun 05 j 21:54	0°♄			-3472 Oct 23 j 17:53	0°♁	
	-3477 Jul 23 j 05:17	0°♂		asc. node	-3472 Dec 27 j 00:48	29°♁34'13	
	-3477 Sep 09 j 14:30	0°♄			-3472 Dec 27 j 19:35	0°♂	
	-3477 Oct 29 j 20:29	0°♂			-3471 Feb 17 j 21:53	0°♄	
	-3477 Dec 25 j 07:13	0°♁			-3471 Apr 08 j 13:58	0°♄	
retrograde	-3476 Feb 25 j 12:50	17°♁29'38			-3471 May 26 j 20:11	0°♂	
opposition	-3476 Mar 29 j 21:02	11°♁07'56	2°40'16	evening set	-3471 Jun 23 j 21:38	17°♂54'27	
greatest brilliancy	-3476 Mar 31 j 04:00	10°♁42'42	-2.3m		-3471 Jul 12 j 11:41	0°♄	
min. Earth dist.	-3476 Apr 07 j 04:41	8°♁26'36	0.45538 AU	max. Earth dist.	-3471 Jul 18 j 03:38	3°♄43'34	2.60761 AU
direct	-3476 May 05 j 06:24	3°♁24'36					
desc. node	-3476 May 13 j 16:16	3°♁53'22		conjunction	-3471 Aug 09 j 22:26	18°♄55'10	1°09'09
	-3476 Jul 16 j 12:31	0°♂		minimum elong	-3471 Aug 09 j 23:01	18°♄56'10	1°09'16
	-3476 Aug 30 j 18:19	0°♂			-3471 Aug 26 j 05:30	0°♂	
	-3476 Oct 11 j 07:15	0°♂		morning rise	-3471 Sep 26 j 13:14	21°♂49'25	
	-3476 Nov 21 j 09:39	0°♄			-3471 Oct 08 j 00:54	0°♁	
	-3475 Jan 02 j 09:47	0°♁			-3471 Nov 18 j 03:48	0°♂	
	-3475 Feb 14 j 22:32	0°♂			-3471 Dec 28 j 01:33	0°♂	
asc. node	-3475 Mar 24 j 03:40	24°♂47'39		desc. node	-3470 Jan 03 j 16:13	5°♂01'32	
	-3475 Apr 01 j 02:18	0°♄			-3470 Feb 05 j 10:01	0°♂	
evening set	-3475 Apr 07 j 16:57	4°♄18'50			-3470 Mar 17 j 02:51	0°♄	
	-3475 May 17 j 12:08	0°♄			-3470 Apr 27 j 13:06	0°♁	
					-3470 Jun 12 j 12:08	0°♂	
conjunction	-3475 May 26 j 15:31	5°♄50'56	0°34'24	retrograde	-3470 Aug 31 j 10:04	29°♂46'30	
minimum elong	-3475 May 26 j 14:23	5°♄49'07	0°34'27	min. Earth dist.	-3470 Oct 03 j 23:08	22°♂14'18	0.58297 AU
max. Earth dist.	-3475 May 31 j 01:25	8°♄40'04	2.66613 AU	opposition	-3470 Oct 09 j 17:19	19°♂58'01	-1°-29'-50
	-3475 Jul 03 j 12:15	0°♂		greatest brilliancy	-3470 Oct 09 j 06:51	20°♂08'22	-1.7m
morning rise	-3475 Jul 11 j 18:44	5°♂16'25		asc. node	-3470 Nov 14 j 00:46	11°♂31'06	
	-3475 Aug 19 j 11:11	0°♄		direct	-3470 Nov 15 j 11:35	11°♂30'17	
	-3475 Oct 05 j 01:48	0°♂			-3469 Jan 19 j 07:32	0°♄	
	-3475 Nov 20 j 12:27	0°♁			-3469 Mar 17 j 14:49	0°♄	
	-3474 Jan 06 j 13:23	0°♂			-3469 May 07 j 08:49	0°♂	
	-3474 Feb 25 j 15:54	0°♂			-3469 Jun 23 j 20:31	0°♄	
desc. node	-3474 Mar 31 j 16:22	16°♂53'38		evening set	-3469 Aug 03 j 22:22	27°♄27'43	
retrograde	-3474 May 12 j 20:17	26°♂48'10			-3469 Aug 07 j 14:53	0°♂	
min. Earth dist.	-3474 Jun 11 j 07:59	21°♂57'35	0.37671 AU	max. Earth dist.	-3469 Aug 19 j 14:05	8°♂19'00	2.50435 AU
opposition	-3474 Jun 12 j 10:26	21°♂40'01	-4°-59'00		-3469 Sep 18 j 23:09	0°♁	
greatest brilliancy	-3474 Jun 12 j 02:47	21°♂45'06	-2.9m				
direct	-3474 Jul 12 j 07:43	16°♂40'32		conjunction	-3469 Sep 23 j 21:12	3°♁35'09	0°38'05
	-3474 Aug 30 j 14:31	0°♂		minimum elong	-3469 Sep 23 j 22:58	3°♁38'21	0°38'07
	-3474 Oct 23 j 00:50	0°♄			-3469 Oct 29 j 08:16	0°♂	
	-3474 Dec 09 j 04:36	0°♁		morning rise	-3469 Nov 18 j 12:15	15°♂23'48	
	-3473 Jan 24 j 16:02	0°♂		desc. node	-3469 Nov 21 j 13:58	17°♂45'40	
asc. node	-3473 Feb 09 j 01:56	9°♂53'38			-3469 Dec 07 j 09:39	0°♂	
	-3473 Mar 12 j 14:32	0°♄			-3468 Jan 14 j 21:46	0°♂	
	-3473 Apr 28 j 23:52	0°♄			-3468 Feb 22 j 17:03	0°♄	
evening set	-3473 May 17 j 15:57	11°♄48'37			-3468 Apr 02 j 18:16	0°♁	
	-3473 Jun 15 j 06:52	0°♂			-3468 May 15 j 04:34	0°♂	
max. Earth dist.	-3473 Jun 23 j 12:52	5°♂16'29	2.66343 AU		-3468 Jun 30 j 22:27	0°♄	
					-3468 Aug 29 j 19:01	0°♄	
conjunction	-3473 Jul 03 j 07:35	11°♂32'58	1°04'26	asc. node	-3468 Oct 01 j 01:37	7°♄24'40	
minimum elong	-3473 Jul 03 j 06:36	11°♂31'24	1°04'33	retrograde	-3468 Oct 06 j 01:01	7°♄34'13	
	-3473 Jul 31 j 19:03	0°♄			-3468 Nov 09 j 06:02	30°♄	
morning rise	-3473 Aug 17 j 11:39	10°♄57'33		min. Earth dist.	-3468 Nov 12 j 22:49	28°♄31'38	0.65704 AU
	-3473 Sep 15 j 01:16	0°♂		opposition	-3468 Nov 15 j 01:55	27°♄40'09	1°41'24
	-3473 Oct 28 j 22:35	0°♁		greatest brilliancy	-3468 Nov 14 j 20:32	27°♄45'34	-1.3m
	-3473 Dec 10 j 14:40	0°♂		direct	-3468 Dec 24 j 14:18	18°♄12'27	
	-3472 Jan 21 j 10:36	0°♂			-3467 Feb 12 j 15:48	0°♄	
desc. node	-3472 Feb 16 j 17:04	18°♂55'47			-3467 Apr 14 j 00:38	0°♂	
	-3472 Mar 03 j 04:20	0°♂			-3467 Jun 02 j 23:57	0°♄	
	-3472 Apr 15 j 15:21	0°♄			-3467 Jul 18 j 11:56	0°♂	
	-3472 Jun 07 j 05:20	0°♁			-3467 Aug 29 j 20:50	0°♁	
retrograde	-3472 Jul 17 j 04:53	9°♄52'00		evening set	-3467 Sep 21 j 18:48	16°♄58'44	
min. Earth dist.	-3472 Aug 14 j 08:00	4°♄28'39	0.46246 AU	desc. node	-3467 Oct 08 j 12:43	29°♄40'21	
greatest brilliancy	-3472 Aug 20 j 13:10	2°♄19'38	-2.3m		-3467 Oct 08 j 22:59	0°♂	
opposition	-3472 Aug 22 j 11:36	1°♄39'07	-5°-26'-9	max. Earth dist.	-3467 Oct 25 j 20:58	13°♂01'44	2.38509 AU
	-3472 Aug 27 j 08:20	30°♄			-3467 Nov 16 j 14:55	0°♂	
direct	-3472 Sep 24 j 05:02	24°♄59'00					

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 44

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

conjunction	-3467 Nov 20 j 20:56	3°♌20'10	0°-29'-55	retrograde	-3461 Feb 02 j 00:05	27°♏36'27	
minimum elong	-3467 Nov 20 j 18:34	3°♌15'31	0°29'59	opposition	-3461 Mar 08 j 22:27	20°♏27'54	4°08'12
	-3467 Dec 24 j 18:09	0°♏		greatest brilliancy	-3461 Mar 10 j 17:10	19°♏50'18	-2.0m
morning rise	-3466 Jan 27 j 11:19	26°♏18'32		min. Earth dist.	-3461 Mar 17 j 06:48	17°♏32'45	0.50717 AU
	-3466 Feb 01 j 06:11	0°♏		direct	-3461 Apr 16 j 10:21	11°♏42'59	
	-3466 Mar 12 j 23:33	0°♏		desc. node	-3461 May 31 j 08:34	23°♏11'19	
	-3466 Apr 23 j 16:44	0°♏			-3461 Jun 14 j 03:22	0°♏	
	-3466 Jun 07 j 03:42	0°♏			-3461 Aug 01 j 10:28	0°♏	
	-3466 Jul 25 j 16:15	0°♏			-3461 Sep 12 j 03:13	0°♏	
asc. node	-3466 Aug 19 j 01:14	13°♏35'34			-3461 Oct 22 j 02:52	0°♏	
	-3466 Sep 22 j 12:17	0°♏			-3461 Dec 01 j 05:21	0°♏	
retrograde	-3466 Nov 09 j 18:20	11°♏23'54			-3460 Jan 11 j 11:26	0°♏	
opposition	-3466 Dec 19 j 07:38	1°♏58'02	3°53'06		-3460 Feb 23 j 10:27	0°♏	
greatest brilliancy	-3466 Dec 19 j 12:44	1°♏52'57	-1.3m	evening set	-3460 Mar 21 j 14:37	18°♏21'02	
min. Earth dist.	-3466 Dec 20 j 23:41	1°♏18'08	0.66962 AU		-3460 Apr 08 j 04:22	0°♏	
	-3466 Dec 24 j 06:42	30°♏		asc. node	-3460 Apr 09 j 20:34	1°♏06'07	
direct	-3465 Jan 29 j 07:42	22°♏00'31					
	-3465 Mar 09 j 23:53	0°♏		conjunction	-3460 May 11 j 05:55	21°♏32'47	0°17'43
	-3465 May 10 j 16:18	0°♏		minimum elong	-3460 May 11 j 05:13	21°♏31'40	0°17'46
	-3465 Jun 27 j 17:59	0°♏		max. Earth dist.	-3460 May 21 j 15:29	28°♏14'45	2.65233 AU
	-3465 Aug 09 j 21:31	0°♏			-3460 May 24 j 09:00	0°♏	
desc. node	-3465 Aug 26 j 10:41	12°♏07'51		morning rise	-3460 Jun 27 j 13:59	21°♏51'04	
	-3465 Sep 19 j 03:52	0°♏			-3460 Jul 10 j 09:47	0°♏	
	-3465 Oct 27 j 19:20	0°♏			-3460 Aug 26 j 18:04	0°♏	
evening set	-3465 Nov 25 j 18:22	22°♏48'18			-3460 Oct 13 j 08:04	0°♏	
	-3465 Dec 04 j 21:50	0°♏			-3460 Nov 30 j 20:22	0°♏	
	-3464 Jan 12 j 10:39	0°♏			-3459 Jan 21 j 21:28	0°♏	
				retrograde	-3459 Apr 10 j 18:55	26°♏46'15	
conjunction	-3464 Jan 30 j 10:11	13°♏42'10	-1°-7'-1	desc. node	-3459 Apr 17 j 09:20	26°♏29'37	
minimum elong	-3464 Jan 30 j 10:50	13°♏43'23	1°07'10	opposition	-3459 May 11 j 12:52	21°♏35'30	-1°-44'-8
	-3464 Feb 21 j 05:58	0°♏		greatest brilliancy	-3459 May 11 j 21:25	21°♏29'34	-2.8m
max. Earth dist.	-3464 Mar 18 j 01:10	18°♏44'25	2.46019 AU	min. Earth dist.	-3459 May 15 j 18:51	20°♏24'45	0.38951 AU
morning rise	-3464 Apr 02 j 10:26	29°♏38'07		direct	-3459 Jun 12 j 12:35	15°♏53'44	
	-3464 Apr 02 j 22:55	0°♏			-3459 Aug 01 j 05:20	0°♏	
	-3464 May 16 j 22:18	0°♏			-3459 Sep 21 j 03:55	0°♏	
	-3464 Jul 02 j 10:00	0°♏			-3459 Nov 04 j 22:49	0°♏	
asc. node	-3464 Jul 05 j 23:44	2°♏14'01			-3459 Dec 19 j 02:10	0°♏	
	-3464 Aug 21 j 03:24	0°♏			-3458 Feb 02 j 00:17	0°♏	
	-3464 Oct 17 j 11:07	0°♏		asc. node	-3458 Feb 25 j 17:31	15°♏32'24	
retrograde	-3464 Dec 16 j 12:45	16°♏10'52			-3458 Mar 20 j 01:29	0°♏	
opposition	-3463 Jan 23 j 11:37	7°♏36'23	4°59'59	evening set	-3458 May 02 j 13:36	27°♏49'52	
greatest brilliancy	-3463 Jan 24 j 16:06	7°♏08'57	-1.5m		-3458 May 05 j 23:21	0°♏	
min. Earth dist.	-3463 Jan 28 j 22:43	5°♏30'15	0.61775 AU	max. Earth dist.	-3458 Jun 14 j 08:43	25°♏04'15	2.67090 AU
	-3463 Feb 14 j 20:09	30°♏					
direct	-3463 Mar 05 j 11:26	27°♏41'35		conjunction	-3458 Jun 18 j 19:15	27°♏54'08	0°55'18
	-3463 Mar 25 j 04:12	0°♏		minimum elong	-3458 Jun 18 j 18:01	27°♏52'09	0°55'24
	-3463 May 31 j 23:36	0°♏			-3458 Jun 22 j 02:07	0°♏	
desc. node	-3463 Jul 13 j 08:50	27°♏12'45		morning rise	-3458 Aug 03 j 00:05	26°♏57'14	
	-3463 Jul 17 j 09:47	0°♏			-3458 Aug 07 j 16:45	0°♏	
	-3463 Aug 27 j 19:43	0°♏			-3458 Sep 22 j 08:36	0°♏	
	-3463 Oct 06 j 00:19	0°♏			-3458 Nov 05 j 23:25	0°♏	
	-3463 Nov 13 j 12:20	0°♏			-3458 Dec 19 j 18:16	0°♏	
	-3463 Dec 22 j 10:46	0°♏			-3457 Feb 01 j 04:51	0°♏	
evening set	-3462 Jan 30 j 00:37	28°♏47'24		desc. node	-3457 Mar 05 j 09:06	21°♏54'49	
	-3462 Jan 31 j 16:22	0°♏			-3457 Mar 17 j 13:52	0°♏	
	-3462 Mar 14 j 18:35	0°♏			-3457 May 07 j 02:54	0°♏	
				retrograde	-3457 Jun 25 j 16:07	14°♏20'12	
conjunction	-3462 Mar 28 j 14:35	9°♏33'14	0°-31'-57	min. Earth dist.	-3457 Jul 22 j 11:03	9°♏41'10	0.41543 AU
minimum elong	-3462 Mar 28 j 16:10	9°♏35'57	0°32'00	greatest brilliancy	-3457 Jul 27 j 17:01	8°♏03'06	-2.6m
max. Earth dist.	-3462 Apr 25 j 15:04	28°♏29'04	2.57975 AU	opposition	-3457 Jul 29 j 16:46	7°♏25'40	-6°-29'-28
	-3462 Apr 27 j 21:43	0°♏		direct	-3457 Aug 29 j 14:14	1°♏40'10	
morning rise	-3462 May 20 j 13:02	14°♏54'03			-3457 Nov 18 j 07:58	0°♏	
asc. node	-3462 May 23 j 22:41	17°♏06'56			-3456 Jan 09 j 05:46	0°♏	
	-3462 Jun 12 j 22:04	0°♏		asc. node	-3456 Jan 13 j 16:08	2°♏40'01	
	-3462 Jul 30 j 13:15	0°♏			-3456 Feb 27 j 12:00	0°♏	
	-3462 Sep 18 j 00:40	0°♏			-3456 Apr 16 j 00:46	0°♏	
	-3462 Nov 10 j 14:57	0°♏			-3456 Jun 02 j 19:36	0°♏	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 45

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

evening set	-3456 Jun 08 j 23:02	3° Π 54'27		-3451 Feb 08 j 22:09	0° Θ	
max. Earth dist.	-3456 Jul 07 j 18:07	22° Π 25'42	2.63566 AU	-3451 Mar 20 j 16:39	0° \approx	
	-3456 Jul 19 j 08:32	0° Θ		-3451 May 01 j 12:51	0° H	
				-3451 Jun 15 j 11:26	0° Υ	
conjunction	-3456 Jul 25 j 11:47	4° Θ 01'53	1°10'56	-3451 Aug 04 j 22:02	0° B	
minimum elong	-3456 Jul 25 j 11:40	4° Θ 01'41	1°11'04	asc. node	-3451 Sep 04 j 15:55	15° B 10'57
	-3456 Sep 02 j 05:59	0° Ω		retrograde	-3451 Oct 27 j 05:15	28° B 34'58
morning rise	-3456 Sep 09 j 15:30	5° Ω 03'38		opposition	-3451 Dec 06 j 01:51	18° B 55'11 3°09'06
	-3456 Oct 15 j 09:25	0° M		greatest brilliancy	-3451 Dec 06 j 00:37	18° B 56'25 -1.3m
	-3456 Nov 25 j 23:43	0° $\underline{\text{A}}$		min. Earth dist.	-3451 Dec 06 j 05:45	18° B 51'16 0.67226 AU
	-3455 Jan 05 j 10:34	0° M		direct	-3450 Jan 15 j 15:32	9° B 06'04
desc. node	-3455 Jan 20 j 09:25	11° M 12'51			-3450 Mar 26 j 20:39	0° Π
	-3455 Feb 14 j 09:30	0° A			-3450 May 20 j 04:01	0° Θ
	-3455 Mar 26 j 20:50	0° Θ			-3450 Jul 05 j 21:04	0° Ω
	-3455 May 08 j 18:43	0° \approx			-3450 Aug 17 j 14:41	0° M
	-3455 Jun 29 j 09:40	0° H		desc. node	-3450 Sep 12 j 03:28	18° M 54'24
retrograde	-3455 Aug 15 j 09:31	12° H 38'29			-3450 Sep 26 j 18:13	0° $\underline{\text{A}}$
min. Earth dist.	-3455 Sep 15 j 21:24	5° H 52'18	0.53951 AU	evening set	-3450 Oct 29 j 19:40	25° $\underline{\text{A}}$ 38'28
opposition	-3455 Sep 22 j 21:33	3° H 11'19	-3°00'-10		-3450 Nov 04 j 08:57	0° M
greatest brilliancy	-3455 Sep 21 j 21:14	3° H 34'40	-1.9m		-3450 Dec 12 j 10:52	0° A
	-3455 Oct 01 j 15:42	30° R \approx				
direct	-3455 Oct 28 j 05:37	25° \approx 18'41		conjunction	-3449 Jan 03 j 04:41	17° A 01'57 -1°-3'-2
	-3455 Nov 26 j 05:27	0° H		minimum elong	-3449 Jan 03 j 02:31	16° A 57'45 1°03'09
asc. node	-3455 Nov 30 j 15:49	1° H 22'36			-3449 Jan 19 j 22:31	0° Θ
	-3454 Feb 01 j 10:03	0° Υ		max. Earth dist.	-3449 Feb 20 j 06:47	23° Θ 46'27 2.40855 AU
	-3454 Mar 26 j 08:39	0° B			-3449 Feb 28 j 15:56	0° \approx
	-3454 May 14 j 20:34	0° Π		morning rise	-3449 Mar 11 j 02:18	7° \approx 39'45
	-3454 Jun 30 j 22:17	0° Θ			-3449 Apr 11 j 07:21	0° H
evening set	-3454 Jul 18 j 07:11	11° Θ 28'02			-3449 May 25 j 08:16	0° Υ
max. Earth dist.	-3454 Aug 05 j 12:12	23° Θ 44'16	2.54990 AU		-3449 Jul 11 j 07:15	0° B
	-3454 Aug 14 j 15:38	0° Ω		asc. node	-3449 Jul 23 j 16:08	7° B 31'50
					-3449 Aug 31 j 20:01	0° Π
conjunction	-3454 Sep 05 j 03:42	14° Ω 59'45	0°55'07		-3449 Nov 11 j 09:27	0° Θ
minimum elong	-3454 Sep 05 j 05:19	15° Ω 02'36	0°55'13	retrograde	-3449 Dec 02 j 03:46	2° Θ 25'15
	-3454 Sep 26 j 03:27	0° M			-3449 Dec 21 j 12:05	30° R Π
morning rise	-3454 Oct 26 j 18:00	22° M 29'29		opposition	-3448 Jan 09 j 20:59	23° Π 27'32 4°43'20
	-3454 Nov 05 j 18:32	0° $\underline{\text{A}}$		greatest brilliancy	-3448 Jan 10 j 15:35	23° Π 09'19 -1.3m
desc. node	-3454 Dec 08 j 08:44	24° $\underline{\text{A}}$ 48'47		min. Earth dist.	-3448 Jan 13 j 20:42	21° Π 53'49 0.64565 AU
	-3454 Dec 15 j 02:23	0° M		direct	-3448 Feb 20 j 02:00	13° Π 26'35
	-3453 Jan 22 j 20:26	0° A			-3448 Apr 19 j 09:58	0° Θ
	-3453 Mar 02 j 21:13	0° Θ			-3448 Jun 11 j 21:05	0° Ω
	-3453 Apr 12 j 05:32	0° \approx			-3448 Jul 26 j 10:39	0° M
	-3453 May 25 j 08:30	0° H		desc. node	-3448 Jul 30 j 02:09	2° M 35'47
	-3453 Jul 13 j 14:33	0° Υ			-3448 Sep 05 j 05:32	0° $\underline{\text{A}}$
retrograde	-3453 Sep 23 j 08:33	23° Υ 52'50			-3448 Oct 14 j 02:40	0° M
asc. node	-3453 Oct 18 j 15:32	19° Υ 29'02			-3448 Nov 21 j 09:10	0° A
min. Earth dist.	-3453 Oct 29 j 16:40	15° Υ 21'37	0.63507 AU		-3448 Dec 30 j 02:16	0° Θ
opposition	-3453 Nov 02 j 06:47	13° Υ 55'03	0°34'48	evening set	-3447 Jan 05 j 20:01	5° Θ 08'20
greatest brilliancy	-3453 Nov 02 j 03:44	13° Υ 58'08	-1.5m		-3447 Feb 08 j 02:19	0° \approx
direct	-3453 Dec 10 j 20:49	4° Υ 46'36				
	-3452 Feb 28 j 07:55	0° B		conjunction	-3447 Mar 08 j 00:44	20° \approx 10'27 0°-50'-5
	-3452 Apr 22 j 23:24	0° Π		minimum elong	-3447 Mar 08 j 02:58	20° \approx 14'27 0°50'10
	-3452 Jun 10 j 16:12	0° Θ			-3447 Mar 21 j 23:27	0° H
	-3452 Jul 25 j 19:18	0° Ω		max. Earth dist.	-3447 Apr 13 j 01:42	15° H 14'47 2.53774 AU
evening set	-3452 Aug 31 j 19:23	26° Ω 07'59		morning rise	-3447 May 03 j 09:03	28° H 56'00
	-3452 Sep 06 j 03:06	0° M			-3447 May 04 j 23:28	0° Υ
max. Earth dist.	-3452 Sep 18 j 17:20	9° M 15'21	2.42830 AU	asc. node	-3447 Jun 09 j 14:15	23° Υ 17'57
	-3452 Oct 16 j 07:29	0° $\underline{\text{A}}$			-3447 Jun 20 j 01:31	0° B
desc. node	-3452 Oct 25 j 06:05	6° $\underline{\text{A}}$ 50'40			-3447 Aug 07 j 05:18	0° Π
					-3447 Sep 27 j 10:00	0° Θ
conjunction	-3452 Oct 26 j 16:21	7° $\underline{\text{A}}$ 56'30	0°-1'-1		-3447 Nov 27 j 12:59	0° Ω
minimum elong	-3452 Oct 26 j 16:18	7° $\underline{\text{A}}$ 56'24	0°01'03	retrograde	-3446 Jan 12 j 18:38	10° Ω 21'25
behind sun begin	-3452 Oct 25 j 15:15	7° $\underline{\text{A}}$ 08'16		opposition	-3446 Feb 18 j 01:45	2° Ω 33'40 4°50'03
behind sun end	-3452 Oct 27 j 17:21	8° $\underline{\text{A}}$ 44'33		greatest brilliancy	-3446 Feb 19 j 18:59	1° Ω 55'35 -1.8m
	-3452 Nov 24 j 02:30	0° M			-3446 Feb 25 j 00:35	30° R Θ
morning rise	-3452 Dec 29 j 05:25	27° M 33'00		min. Earth dist.	-3446 Feb 25 j 13:12	29° Θ 48'36 0.55622 AU
	-3451 Jan 01 j 08:24	0° A		direct	-3446 Mar 29 j 22:56	23° Θ 09'00

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 46

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3446 May 03 j 08:29	0°♈				-3441 Jun 10 j 16:10	0°♊	
desc. node	-3446 Jun 17 j 01:14	22°♈07'57		max. Earth dist.	-3441 Jun 28 j 23:49	11°♊43'24	2.65582 AU	
	-3446 Jun 29 j 19:44	0°♎						
	-3446 Aug 12 j 15:41	0°♊		conjunction	-3441 Jul 11 j 16:16	19°♊54'24	1°08'01	
	-3446 Sep 21 j 21:22	0°♋		minimum elong	-3441 Jul 11 j 15:34	19°♊53'15	1°08'08	
	-3446 Oct 31 j 01:16	0°♌			-3441 Jul 27 j 04:30	0°♍		
	-3446 Dec 09 j 12:51	0°♎		morning rise	-3441 Aug 26 j 00:40	19°♍43'28		
	-3445 Jan 19 j 06:18	0°♏			-3441 Sep 10 j 07:32	0°♈		
	-3445 Mar 02 j 18:49	0°♏			-3441 Oct 23 j 22:04	0°♎		
evening set	-3445 Mar 04 j 02:32	0°♏54'38			-3441 Dec 05 j 04:05	0°♊		
	-3445 Apr 16 j 05:08	0°♐			-3440 Jan 15 j 10:13	0°♋		
				desc. node	-3440 Feb 07 j 02:59	16°♋39'09		
conjunction	-3445 Apr 25 j 23:24	6°♐26'11	0°00'-53		-3440 Feb 25 j 08:30	0°♌		
minimum elong	-3445 Apr 25 j 23:27	6°♐26'16	0°00'53		-3440 Apr 07 j 06:51	0°♎		
behind sun begin	-3445 Apr 25 j 02:30	5°♐51'54			-3440 May 23 j 20:28	0°♏		
behind sun end	-3445 Apr 26 j 20:23	7°♐00'38		retrograde	-3440 Jul 28 j 12:02	22°♏54'27		
asc. node	-3445 Apr 27 j 12:08	7°♐26'29		min. Earth dist.	-3440 Aug 26 j 18:39	17°♏01'01	0.49014 AU	
max. Earth dist.	-3445 May 12 j 18:03	17°♐23'45	2.63037 AU	greatest brilliancy	-3440 Sep 02 j 01:26	14°♏44'32	-2.1m	
	-3445 Jun 01 j 06:26	0°♑		opposition	-3440 Sep 03 j 16:55	14°♏08'31	-4°-35'-18	
morning rise	-3445 Jun 14 j 00:21	8°♑09'56		direct	-3440 Oct 07 j 10:08	7°♏00'12		
	-3445 Jul 18 j 10:19	0°♊		asc. node	-3440 Dec 17 j 06:17	29°♏10'42		
	-3445 Sep 04 j 08:38	0°♋			-3440 Dec 18 j 21:55	0°♌		
	-3445 Oct 23 j 09:34	0°♈			-3439 Feb 11 j 19:51	0°♐		
	-3445 Dec 14 j 16:03	0°♎			-3439 Apr 03 j 10:12	0°♑		
	-3444 Feb 29 j 10:48	0°♊			-3439 May 22 j 01:49	0°♊		
retrograde	-3444 Mar 11 j 18:44	0°♊45'36		evening set	-3439 Jul 02 j 14:59	26°♊34'12		
	-3444 Mar 22 j 20:09	30°♋			-3439 Jul 07 j 20:56	0°♋		
opposition	-3444 Apr 13 j 01:18	24°♋52'32	1°22'05	max. Earth dist.	-3439 Jul 24 j 11:53	10°♋58'47	2.58900 AU	
greatest brilliancy	-3444 Apr 13 j 17:21	24°♋40'13	-2.5m					
min. Earth dist.	-3444 Apr 20 j 15:38	22°♋33'12	0.42781 AU	conjunction	-3439 Aug 19 j 03:16	28°♋17'48	1°05'43	
desc. node	-3444 May 04 j 01:12	19°♋11'29		minimum elong	-3439 Aug 19 j 04:17	28°♋19'32	1°05'49	
direct	-3444 May 17 j 23:23	17°♋52'31			-3439 Aug 21 j 14:54	0°♈		
	-3444 Jul 02 j 08:14	0°♊			-3439 Oct 03 j 07:40	0°♎		
	-3444 Aug 22 j 06:49	0°♋		morning rise	-3439 Oct 06 j 21:20	2°♎34'08		
	-3444 Oct 04 j 11:13	0°♌			-3439 Nov 13 j 06:18	0°♊		
	-3444 Nov 15 j 10:39	0°♍			-3439 Dec 22 j 22:43	0°♋		
	-3444 Dec 28 j 00:16	0°♏		desc. node	-3439 Dec 25 j 01:35	1°♋37'14		
	-3443 Feb 09 j 22:17	0°♏			-3438 Jan 31 j 01:13	0°♌		
asc. node	-3443 Mar 14 j 09:47	21°♏32'58			-3438 Mar 11 j 10:56	0°♎		
	-3443 Mar 27 j 08:02	0°♐			-3438 Apr 21 j 08:26	0°♏		
evening set	-3443 Apr 16 j 23:24	13°♐22'11			-3438 Jun 04 j 19:57	0°♌		
	-3443 May 12 j 21:12	0°♑			-3438 Jul 30 j 18:19	0°♐		
				retrograde	-3438 Sep 09 j 00:28	9°♐10'56		
conjunction	-3443 Jun 04 j 04:13	14°♑13'58	0°42'54	min. Earth dist.	-3438 Oct 13 j 14:43	1°♐16'10	0.60377 AU	
minimum elong	-3443 Jun 04 j 02:58	14°♑11'58	0°42'58		-3438 Oct 16 j 19:16	30°♑		
max. Earth dist.	-3443 Jun 05 j 10:03	15°♑01'31	2.67020 AU	opposition	-3438 Oct 18 j 14:49	29°♑16'33	0°-41'-32	
	-3443 Jun 28 j 21:34	0°♊		greatest brilliancy	-3438 Oct 18 j 10:29	29°♑20'51	-1.6m	
morning rise	-3443 Jul 19 j 20:09	13°♊23'02		asc. node	-3438 Nov 04 j 07:19	23°♑25'32		
	-3443 Aug 14 j 17:02	0°♋		direct	-3438 Nov 25 j 01:41	20°♑32'47		
	-3443 Sep 29 j 22:31	0°♈			-3437 Jan 07 j 17:46	0°♐		
	-3443 Nov 14 j 14:34	0°♎			-3437 Mar 11 j 07:43	0°♑		
	-3443 Dec 30 j 03:41	0°♊			-3437 May 02 j 04:08	0°♊		
	-3442 Feb 14 j 16:49	0°♋			-3437 Jun 19 j 01:27	0°♋		
desc. node	-3442 Mar 22 j 03:05	21°♋07'19			-3437 Aug 02 j 23:21	0°♈		
	-3442 Apr 08 j 01:41	0°♌		evening set	-3437 Aug 13 j 22:38	7°♈36'45		
retrograde	-3442 May 29 j 23:22	14°♌47'07		max. Earth dist.	-3437 Aug 29 j 04:12	18°♈21'51	2.47773 AU	
min. Earth dist.	-3442 Jun 26 j 12:23	10°♌17'34	0.38289 AU		-3437 Sep 14 j 07:51	0°♎		
greatest brilliancy	-3442 Jun 29 j 08:15	9°♌30'45	-2.8m					
opposition	-3442 Jun 30 j 09:56	9°♌12'56	-6°-8'-44	conjunction	-3437 Oct 05 j 09:10	15°♎30'18	0°25'28	
direct	-3442 Jul 30 j 06:54	4°♌09'28		minimum elong	-3437 Oct 05 j 10:36	15°♎32'58	0°25'29	
	-3442 Oct 12 j 13:23	0°♎			-3437 Oct 24 j 15:34	0°♊		
	-3442 Dec 02 j 02:40	0°♏		desc. node	-3437 Nov 11 j 23:53	14°♊02'03		
	-3441 Jan 18 j 21:36	0°♏		morning rise	-3437 Dec 02 j 16:29	0°♋03'43		
asc. node	-3441 Jan 30 j 06:54	7°♏11'14			-3437 Dec 02 j 14:35	0°♋		
	-3441 Mar 07 j 11:47	0°♐			-3436 Jan 09 j 23:57	0°♌		
	-3441 Apr 24 j 05:30	0°♑			-3436 Feb 17 j 16:28	0°♎		
evening set	-3441 May 26 j 04:41	20°♑10'01			-3436 Mar 28 j 13:56	0°♏		

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 47

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3436 May 09 j 16:38	0° H		desc. node	-3431 Jul 03 j 18:58	25° Ω 00'16	
	-3436 Jun 24 j 12:32	0° Y			-3431 Jul 11 j 05:39	0° M	
	-3436 Aug 17 j 22:39	0° B			-3431 Aug 22 j 06:36	0° L	
asc. node	-3436 Sep 21 j 07:33	12° B 39'59			-3431 Sep 30 j 18:00	0° M	
retrograde	-3436 Oct 13 j 19:25	15° B 37'13			-3431 Nov 08 j 10:03	0° J	
opposition	-3436 Nov 22 j 19:48	5° B 47'04	2°16'13		-3431 Dec 17 j 11:47	0° C	
min. Earth dist.	-3436 Nov 21 j 12:02	6° B 19'03	0.66511 AU		-3430 Jan 26 j 20:19	0° \approx	
greatest brilliancy	-3436 Nov 22 j 14:55	5° B 51'59	-1.3m	evening set	-3430 Feb 11 j 16:58	11° \approx 26'37	
	-3436 Dec 08 j 12:15	30° R Y			-3430 Mar 10 j 00:58	0° H	
direct	-3435 Jan 01 j 18:18	26° Y 10'43					
	-3435 Jan 28 j 09:18	0° B		conjunction	-3430 Apr 08 j 10:06	20° H 05'21	0°-20'-34
	-3435 Apr 07 j 12:30	0° II		minimum elong	-3430 Apr 08 j 11:06	20° H 07'03	0°20'37
	-3435 May 28 j 16:44	0° C			-3430 Apr 23 j 05:40	0° Y	
	-3435 Jul 13 j 14:21	0° Ω		max. Earth dist.	-3430 May 02 j 04:49	5° Y 56'03	2.60016 AU
	-3435 Aug 25 j 02:35	0° M		asc. node	-3430 May 14 j 04:00	13° Y 47'05	
desc. node	-3435 Sep 28 j 21:32	25° M 55'46		morning rise	-3430 May 29 j 18:04	23° Y 54'24	
evening set	-3435 Oct 04 j 18:59	0° L 25'28			-3430 Jun 08 j 05:17	0° B	
	-3435 Oct 04 j 05:40	0° L			-3430 Jul 25 j 14:54	0° II	
	-3435 Nov 11 j 21:22	0° M			-3430 Sep 12 j 09:41	0° C	
					-3430 Nov 02 j 19:11	0° Ω	
conjunction	-3435 Dec 06 j 03:36	19° M 05'41	0°-44'-50		-3429 Jan 03 j 17:43	0° M	
minimum elong	-3435 Dec 06 j 00:27	18° M 59'28	0°44'54	retrograde	-3429 Feb 14 j 18:51	8° M 54'13	
max. Earth dist.	-3435 Dec 10 j 23:02	22° M 53'05	2.37533 AU	opposition	-3429 Mar 20 j 21:33	2° M 10'33	3°24'31
	-3435 Dec 19 j 23:54	0° J		greatest brilliancy	-3429 Mar 22 j 11:38	1° M 38'19	-2.2m
	-3434 Jan 27 j 11:14	0° C			-3429 Mar 27 j 08:08	30° R Ω	
morning rise	-3434 Feb 12 j 12:41	12° C 17'14		min. Earth dist.	-3429 Mar 29 j 09:56	29° Ω 19'00	0.47863 AU
	-3434 Mar 08 j 03:37	0° \approx		direct	-3429 Apr 27 j 08:08	23° Ω 56'48	
	-3434 Apr 18 j 18:39	0° H		desc. node	-3429 May 21 j 19:08	27° Ω 45'15	
	-3434 Jun 01 j 23:48	0° Y			-3429 May 28 j 15:23	0° M	
	-3434 Jul 19 j 17:40	0° B			-3429 Jul 24 j 03:46	0° L	
asc. node	-3434 Aug 09 j 07:04	11° B 57'43			-3429 Sep 05 j 11:16	0° M	
	-3434 Sep 12 j 15:21	0° II			-3429 Oct 16 j 04:29	0° J	
retrograde	-3434 Nov 17 j 18:14	19° II 14'40			-3429 Nov 25 j 18:08	0° C	
opposition	-3434 Dec 27 j 01:08	9° II 57'43	4°14'31		-3428 Jan 06 j 08:21	0° \approx	
greatest brilliancy	-3434 Dec 27 j 10:37	9° II 48'18	-1.3m		-3428 Feb 18 j 13:17	0° H	
min. Earth dist.	-3434 Dec 29 j 12:51	8° II 58'30	0.66378 AU	evening set	-3428 Mar 31 j 13:01	28° H 04'21	
	-3433 Feb 03 j 14:34	30° R B		asc. node	-3428 Mar 31 j 01:07	27° H 44'46	
direct	-3433 Feb 06 j 04:15	29° B 57'29			-3428 Apr 03 j 11:23	0° Y	
	-3433 Feb 08 j 18:37	0° II			-3428 May 19 j 18:07	0° B	
	-3433 May 03 j 18:18	0° C					
	-3433 Jun 22 j 04:56	0° Ω		conjunction	-3428 May 20 j 04:15	0° B 16'16	0°27'42
	-3433 Aug 04 j 18:41	0° M		minimum elong	-3428 May 20 j 03:16	0° B 14'40	0°27'45
desc. node	-3433 Aug 16 j 18:57	8° M 43'27		max. Earth dist.	-3428 May 27 j 04:53	4° B 46'27	2.66107 AU
	-3433 Sep 14 j 05:06	0° L		morning rise	-3428 Jul 05 j 18:34	0° II 00'52	
greatest brilliancy	-3433 Oct 18 j 07:17	26° L 22'23	1.2m		-3428 Jul 05 j 18:01	0° II	
	-3433 Oct 22 j 22:22	0° M			-3428 Aug 21 j 20:51	0° C	
	-3433 Nov 30 j 01:54	0° J			-3428 Oct 07 j 20:54	0° Ω	
evening set	-3433 Dec 11 j 07:45	8° J 48'34			-3428 Nov 24 j 02:17	0° M	
	-3432 Jan 07 j 15:45	0° C			-3427 Jan 11 j 19:03	0° L	
					-3427 Mar 08 j 05:42	0° M	
conjunction	-3432 Feb 13 j 19:37	28° C 01'08	-1°-3'-24	desc. node	-3427 Apr 07 j 18:51	11° M 02'50	
minimum elong	-3432 Feb 13 j 21:23	28° C 04'24	1°03'32	retrograde	-3427 Apr 28 j 19:17	13° M 42'53	
	-3432 Feb 16 j 12:01	0° \approx		opposition	-3427 May 29 j 05:48	8° M 40'59	-3°-40'-38
max. Earth dist.	-3432 Mar 28 j 19:09	29° \approx 42'01	2.48916 AU	greatest brilliancy	-3427 May 29 j 09:54	8° M 38'14	-2.9m
	-3432 Mar 29 j 05:24	0° H		min. Earth dist.	-3427 May 30 j 15:28	8° M 18'32	0.37865 AU
morning rise	-3432 Apr 14 j 07:41	11° H 10'22		direct	-3427 Jun 28 j 18:38	3° M 30'06	
	-3432 May 12 j 03:46	0° Y			-3427 Sep 10 j 07:04	0° J	
asc. node	-3432 Jun 26 j 06:36	29° Y 16'41			-3427 Oct 28 j 10:48	0° C	
	-3432 Jun 27 j 10:01	0° B			-3427 Dec 12 j 23:53	0° \approx	
	-3432 Aug 15 j 09:30	0° II			-3426 Jan 27 j 15:47	0° H	
	-3432 Oct 08 j 14:01	0° C		asc. node	-3426 Feb 15 j 23:13	12° H 31'51	
retrograde	-3432 Dec 25 j 21:39	24° C 51'29			-3426 Mar 15 j 03:18	0° Y	
opposition	-3431 Feb 01 j 07:41	16° C 31'44	5°02'10		-3426 May 01 j 06:51	0° B	
greatest brilliancy	-3431 Feb 02 j 17:23	15° C 59'39	-1.6m	evening set	-3426 May 11 j 06:44	6° B 20'23	
min. Earth dist.	-3431 Feb 07 j 13:04	14° C 09'46	0.59837 AU		-3426 Jun 17 j 11:49	0° II	
direct	-3431 Mar 14 j 00:49	6° C 44'02		max. Earth dist.	-3426 Jun 19 j 18:03	1° II 26'34	2.66782 AU
	-3431 May 23 j 17:40	0° Ω					

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 48

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

conjunction	-3426 Jun 27 j 03:26	6°II10'10	1°01'02			-3421 Oct 19 j 09:13	30°R°Y	
minimum elong	-3426 Jun 27 j 02:20	6°II08'23	1°01'09	min. Earth dist.		-3421 Nov 07 j 11:42	23°Y27'06	0.64838 AU
	-3426 Aug 03 j 01:31	0°S		opposition		-3421 Nov 10 j 06:54	22°Y19'25	1°14'39
morning rise	-3426 Aug 11 j 06:12	5°S21'02		greatest brilliancy		-3421 Nov 10 j 01:49	22°Y24'33	-1.4m
	-3426 Sep 17 j 12:26	0°Q		direct		-3421 Dec 19 j 09:55	12°Y59'53	
	-3426 Oct 31 j 17:39	0°M				-3420 Feb 19 j 15:40	0°X	
	-3426 Dec 13 j 21:00	0°A				-3420 Apr 17 j 04:41	0°II	
	-3425 Jan 25 j 07:52	0°M				-3420 Jun 05 j 15:33	0°S	
desc. node	-3425 Feb 23 j 19:26	20°M49'25				-3420 Jul 21 j 01:01	0°Q	
	-3425 Mar 08 j 23:07	0°X				-3420 Sep 01 j 10:35	0°M	
	-3425 Apr 23 j 06:50	0°S		evening set		-3420 Sep 12 j 09:41	8°M02'53	
retrograde	-3425 Jul 08 j 22:37	29°S43'03		max. Earth dist.		-3420 Oct 05 j 12:43	25°M22'37	2.40238 AU
min. Earth dist.	-3425 Aug 05 j 06:19	24°S42'01	0.44041 AU			-3420 Oct 11 j 14:32	0°A	
greatest brilliancy	-3425 Aug 11 j 05:03	22°S43'58	-2.4m	desc. node		-3420 Oct 15 j 15:11	3°A04'42	
opposition	-3425 Aug 13 j 06:11	22°S02'56	-5°-59'-50					
direct	-3425 Sep 14 j 04:00	15°S47'12		conjunction		-3420 Nov 09 j 13:57	22°A22'21	0°-17'-32
	-3425 Nov 06 j 07:00	0°≈		minimum elong		-3420 Nov 09 j 12:34	22°A19'40	0°17'34
	-3424 Jan 02 j 06:08	0°X				-3420 Nov 19 j 08:13	0°M	
asc. node	-3424 Jan 03 j 22:09	0°X57'35				-3420 Dec 27 j 12:26	0°X	
	-3424 Feb 21 j 22:30	0°Y		morning rise		-3419 Jan 14 j 17:28	14°X15'35	
	-3424 Apr 11 j 01:42	0°X				-3419 Feb 04 j 00:36	0°S	
	-3424 May 29 j 02:57	0°II				-3419 Mar 15 j 17:26	0°≈	
evening set	-3424 Jun 17 j 12:14	12°II20'47				-3419 Apr 26 j 10:12	0°X	
max. Earth dist.	-3424 Jul 13 j 16:57	29°II18'55	2.62111 AU			-3419 Jun 09 j 23:42	0°Y	
	-3424 Jul 14 j 18:01	0°S				-3419 Jul 29 j 01:41	0°X	
				asc. node		-3419 Aug 25 j 22:12	14°X56'41	
conjunction	-3424 Aug 03 j 06:06	12°S53'33	1°10'30			-3419 Sep 30 j 07:39	0°II	
minimum elong	-3424 Aug 03 j 06:24	12°S54'02	1°10'37	retrograde		-3419 Nov 03 j 23:42	6°II23'26	
	-3424 Aug 28 j 14:21	0°Q				-3419 Dec 05 j 14:27	30°R°X	
morning rise	-3424 Sep 19 j 02:44	14°Q51'28		opposition		-3419 Dec 13 j 16:28	26°X50'49	3°35'43
	-3424 Oct 10 j 14:10	0°M		greatest brilliancy		-3419 Dec 13 j 18:26	26°X48'51	-1.2m
	-3424 Nov 20 j 22:43	0°A		min. Earth dist.		-3419 Dec 14 j 15:55	26°X27'22	0.67212 AU
	-3424 Dec 31 j 02:30	0°M		direct		-3418 Jan 23 j 12:18	16°X56'39	
desc. node	-3423 Jan 10 j 19:10	8°M05'14				-3418 Mar 17 j 06:59	0°II	
	-3423 Feb 08 j 16:45	0°X				-3418 May 14 j 04:10	0°S	
	-3423 Mar 20 j 16:07	0°S				-3418 Jun 30 j 16:31	0°Q	
	-3423 May 01 j 13:11	0°≈				-3418 Aug 12 j 16:57	0°M	
	-3423 Jun 18 j 00:06	0°X		desc. node		-3418 Sep 02 j 13:40	15°M20'58	
retrograde	-3423 Aug 24 j 17:51	23°X06'24				-3418 Sep 21 j 22:58	0°A	
min. Earth dist.	-3423 Sep 26 j 09:33	15°X53'58	0.56427 AU			-3418 Oct 30 j 14:31	0°M	
opposition	-3423 Oct 02 j 17:45	13°X25'24	-2°-7'-13	evening set		-3418 Nov 13 j 20:07	11°M12'16	
greatest brilliancy	-3423 Oct 02 j 01:40	13°X41'08	-1.8m			-3418 Dec 07 j 16:26	0°X	
direct	-3423 Nov 07 j 20:52	5°X12'33				-3417 Jan 15 j 03:57	0°S	
asc. node	-3423 Nov 20 j 21:53	6°X14'17						
	-3422 Jan 24 j 12:25	0°Y		conjunction		-3417 Jan 18 j 19:16	2°S47'45	-1°-7'-2
	-3422 Mar 20 j 16:08	0°X		minimum elong		-3417 Jan 18 j 18:42	2°S46'40	1°07'10
	-3422 May 09 j 20:56	0°II				-3417 Feb 23 j 21:16	0°≈	
	-3422 Jun 26 j 05:13	0°S		max. Earth dist.		-3417 Mar 09 j 02:38	9°≈42'08	2.43655 AU
evening set	-3422 Jul 27 j 16:05	20°S53'27		morning rise		-3417 Mar 24 j 17:50	20°≈58'06	
	-3422 Aug 10 j 00:18	0°Q				-3417 Apr 06 j 11:57	0°X	
max. Earth dist.	-3422 Aug 13 j 07:35	2°Q16'44	2.52531 AU			-3417 May 20 j 10:23	0°Y	
						-3417 Jul 06 j 00:37	0°X	
conjunction	-3422 Sep 15 j 14:09	25°Q45'20	0°46'08	asc. node		-3417 Jul 13 j 20:50	4°X51'29	
minimum elong	-3422 Sep 15 j 15:55	25°Q48'31	0°46'12			-3417 Aug 25 j 07:40	0°II	
	-3422 Sep 21 j 11:10	0°M				-3417 Oct 24 j 21:15	0°S	
	-3422 Oct 31 j 23:43	0°A		retrograde		-3417 Dec 10 j 20:06	10°S39'17	
morning rise	-3422 Nov 08 j 06:31	5°A30'46		opposition		-3416 Jan 18 j 03:23	1°S53'43	4°54'22
desc. node	-3422 Nov 28 j 16:49	21°A08'13		greatest brilliancy		-3416 Jan 19 j 03:23	1°S30'24	-1.4m
	-3422 Dec 10 j 04:28	0°M		min. Earth dist.		-3416 Jan 22 j 22:26	0°S02'02	0.63148 AU
	-3421 Jan 17 j 19:06	0°X				-3416 Jan 23 j 00:32	30°R°II	
	-3421 Feb 25 j 16:13	0°S		direct		-3416 Feb 28 j 05:58	21°II55'17	
	-3421 Apr 06 j 19:12	0°≈				-3416 Apr 07 j 06:13	0°S	
	-3421 May 19 j 09:42	0°X				-3416 Jun 05 j 06:11	0°Q	
	-3421 Jul 05 j 20:47	0°Y		desc. node		-3416 Jul 20 j 11:50	29°Q45'06	
	-3421 Sep 11 j 23:09	0°X				-3416 Jul 20 j 20:21	0°M	
retrograde	-3421 Oct 01 j 06:38	2°X15'57				-3416 Aug 31 j 00:08	0°A	
asc. node	-3421 Oct 08 j 22:28	1°X51'49				-3416 Oct 09 j 01:44	0°M	

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 49

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

	-3416 Nov 16 j 10:55	0°♊			-3411 Sep 24 j 22:03	0°♎		
	-3416 Dec 25 j 06:09	0°♋			-3411 Nov 08 j 23:33	0°♏		
evening set	-3415 Jan 19 j 19:45	19°♋16'43			-3411 Dec 23 j 10:54	0°♏		
	-3415 Feb 03 j 08:08	0°♌			-3410 Feb 05 j 23:47	0°♍		
	-3415 Mar 17 j 06:34	0°♌		desc. node	-3410 Mar 12 j 11:47	22°♍31'01		
					-3410 Mar 24 j 13:00	0°♊		
conjunction	-3415 Mar 20 j 00:28	1°♌54'51	0°-40'00		-3410 May 27 j 08:26	0°♋		
minimum elong	-3415 Mar 20 j 02:25	1°♌58'15	0°40'03	retrograde	-3410 Jun 14 j 13:48	2°♋14'42		
max. Earth dist.	-3415 Apr 20 j 15:42	23°♌33'09	2.56174 AU		-3410 Jul 02 j 22:25	30°♌♊		
	-3415 Apr 30 j 06:56	0°♍		min. Earth dist.	-3410 Jul 11 j 08:07	27°♌46'27	0.39821 AU	
morning rise	-3415 May 13 j 09:19	8°♍40'24		greatest brilliancy	-3410 Jul 15 j 17:21	26°♌28'59	-2.7m	
asc. node	-3415 May 30 j 19:48	20°♍03'18		opposition	-3410 Jul 17 j 10:16	25°♌58'40	-6°-35'-8	
	-3415 Jun 15 j 06:32	0°♎		direct	-3410 Aug 16 j 16:39	20°♌35'25		
	-3415 Aug 02 j 01:37	0°♏			-3410 Sep 26 j 21:33	0°♋		
	-3415 Sep 21 j 03:26	0°♏			-3410 Nov 24 j 02:58	0°♌		
	-3415 Nov 15 j 22:58	0°♎			-3409 Jan 12 j 20:21	0°♌		
retrograde	-3414 Jan 23 j 21:01	20°♎19'51		asc. node	-3409 Jan 20 j 13:24	4°♌45'17		
opposition	-3414 Feb 28 j 11:27	12°♎52'33	4°30'02		-3409 Mar 02 j 06:42	0°♍		
greatest brilliancy	-3414 Mar 02 j 06:26	12°♎13'48	-1.9m		-3409 Apr 19 j 10:14	0°♎		
min. Earth dist.	-3414 Mar 08 j 12:21	9°♎59'39	0.52987 AU	evening set	-3409 Jun 03 j 15:39	28°♎28'06		
direct	-3414 Apr 08 j 16:00	3°♎47'26			-3409 Jun 06 j 01:30	0°♏		
desc. node	-3414 Jun 07 j 11:03	22°♎21'15		max. Earth dist.	-3409 Jul 04 j 13:41	18°♏15'56	2.64569 AU	
	-3414 Jun 21 j 03:37	0°♏						
	-3414 Aug 06 j 00:40	0°♏		conjunction	-3409 Jul 20 j 02:37	28°♏21'36	1°10'14	
	-3414 Sep 16 j 00:01	0°♐		minimum elong	-3409 Jul 20 j 02:14	28°♏20'59	1°10'21	
	-3414 Oct 25 j 13:35	0°♊			-3409 Jul 22 j 14:49	0°♏		
	-3414 Dec 04 j 08:02	0°♋		morning rise	-3409 Sep 03 j 19:50	28°♏46'12		
	-3413 Jan 14 j 07:07	0°♌			-3409 Sep 05 j 15:21	0°♎		
	-3413 Feb 25 j 23:56	0°♌			-3409 Oct 19 j 00:19	0°♏		
evening set	-3413 Mar 14 j 20:31	11°♌29'28			-3409 Nov 29 j 21:37	0°♏		
	-3413 Apr 11 j 13:17	0°♍			-3408 Jan 09 j 16:42	0°♐		
asc. node	-3413 Apr 17 j 17:46	4°♍04'45		desc. node	-3408 Jan 28 j 12:02	13°♐59'14		
					-3408 Feb 19 j 00:29	0°♊		
conjunction	-3413 May 05 j 10:20	15°♍38'42	0°10'08		-3408 Mar 30 j 23:39	0°♋		
minimum elong	-3413 May 05 j 09:54	15°♍38'00	0°10'09		-3408 May 13 j 22:42	0°♌		
behind sun begin	-3413 May 04 j 17:55	15°♍12'01			-3408 Jul 11 j 07:24	0°♌		
behind sun end	-3413 May 06 j 01:54	16°♍03'59		retrograde	-3408 Aug 07 j 23:20	4°♌55'27		
max. Earth dist.	-3413 May 18 j 12:59	24°♍08'18	2.64354 AU		-3408 Sep 03 j 08:50	30°♌♌		
	-3413 May 27 j 15:23	0°♎		min. Earth dist.	-3408 Sep 07 j 12:11	28°♌31'41	0.51799 AU	
morning rise	-3413 Jun 22 j 10:59	16°♎30'39		opposition	-3408 Sep 14 j 23:10	25°♌43'36	-3°-40'-49	
	-3413 Jul 13 j 16:51	0°♏		greatest brilliancy	-3408 Sep 13 j 16:07	26°♌12'53	-2.0m	
	-3413 Aug 30 j 06:35	0°♏		direct	-3408 Oct 19 j 13:55	18°♌09'33		
	-3413 Oct 17 j 09:49	0°♎		asc. node	-3408 Dec 07 j 13:06	0°♌05'09		
	-3413 Dec 06 j 05:24	0°♏			-3408 Dec 07 j 08:07	0°♌		
	-3412 Jan 31 j 16:26	0°♏			-3407 Feb 05 j 07:12	0°♍		
retrograde	-3412 Mar 28 j 05:16	15°♏15'58			-3407 Mar 29 j 03:00	0°♎		
desc. node	-3412 Apr 24 j 11:40	10°♏57'53			-3407 May 17 j 06:10	0°♏		
opposition	-3412 Apr 28 j 12:43	9°♏48'46	0°-16'-54		-3407 Jul 03 j 05:58	0°♏		
greatest brilliancy	-3412 Apr 28 j 13:58	9°♏47'52	-2.7m	evening set	-3407 Jul 11 j 11:30	5°♏24'18		
min. Earth dist.	-3412 May 04 j 14:13	8°♏03'23	0.40432 AU	max. Earth dist.	-3407 Jul 31 j 06:02	18°♏35'03	2.56837 AU	
direct	-3412 May 31 j 20:23	3°♏33'12			-3407 Aug 17 j 00:39	0°♎		
	-3412 Aug 11 j 15:55	0°♐						
	-3412 Sep 26 j 20:56	0°♊		conjunction	-3407 Aug 28 j 15:33	8°♎02'03	1°00'22	
	-3412 Nov 09 j 02:55	0°♋		minimum elong	-3407 Aug 28 j 16:56	8°♎04'28	1°00'27	
	-3412 Dec 22 j 10:25	0°♌			-3407 Sep 28 j 15:48	0°♏		
	-3411 Feb 04 j 19:40	0°♌		morning rise	-3407 Oct 17 j 20:10	13°♏57'32		
asc. node	-3411 Mar 04 j 14:46	18°♌20'24			-3407 Nov 08 j 10:53	0°♏		
	-3411 Mar 22 j 12:44	0°♍		desc. node	-3407 Dec 15 j 11:49	28°♏06'45		
evening set	-3411 Apr 25 j 23:55	22°♍10'26			-3407 Dec 17 j 22:51	0°♐		
	-3411 May 08 j 05:56	0°♎			-3406 Jan 25 j 20:19	0°♊		
max. Earth dist.	-3411 Jun 10 j 17:57	21°♎21'00	2.67161 AU		-3406 Mar 05 j 23:55	0°♋		
					-3406 Apr 15 j 11:59	0°♌		
conjunction	-3411 Jun 12 j 14:39	22°♎32'13	0°50'29		-3406 May 28 j 23:56	0°♌		
minimum elong	-3411 Jun 12 j 13:22	22°♎30'10	0°50'34		-3406 Jul 18 j 23:11	0°♍		
	-3411 Jun 24 j 07:23	0°♏		retrograde	-3406 Sep 17 j 08:17	18°♍11'50		
morning rise	-3411 Jul 27 j 22:56	21°♏34'16		min. Earth dist.	-3406 Oct 22 j 21:59	9°♍56'33	0.62225 AU	
	-3411 Aug 10 j 00:16	0°♏		asc. node	-3406 Oct 25 j 12:43	8°♍53'44		

Planetary Phenomena of Mars from -3900 through -3400 (UT), Astrodienst AG 7-Dez-2017 14:37, page 50

Attention, astronomical year style is used: The year -3900 in astronomical counting style is the year 3901 BCE in historical counting style.

opposition	-3406 Oct 27 j 03:58	8° Υ 14'22	0°03'59		-3400 Jan 02 j 20:19	0° \mathcal{Z}	
greatest brilliancy	-3406 Nov 11 j 03:30	2° Υ 48'39	-1.6m		-3400 Feb 11 j 17:35	0° \approx	
	-3406 Nov 23 j 17:46	30° \mathcal{R}					
direct	-3406 Dec 04 j 06:36	29° \mathcal{K} 16'18		conjunction	-3400 Feb 27 j 07:22	11° \approx 21'54	0°-56'-37
	-3406 Dec 15 j 08:19	0° Υ		minimum elong	-3400 Feb 27 j 09:37	11° \approx 25'59	0°56'43
	-3405 Mar 04 j 10:17	0° \mathcal{B}			-3400 Mar 24 j 11:40	0° \mathcal{K}	
	-3405 Apr 26 j 19:10	0° Π		max. Earth dist.	-3400 Apr 07 j 02:49	9° \mathcal{K} 28'31	2.51668 AU
	-3405 Jun 14 j 04:34	0° \mathcal{S}		morning rise	-3400 Apr 25 j 10:43	21° \mathcal{K} 59'01	
	-3405 Jul 29 j 06:39	0° \mathcal{Q}			-3400 May 07 j 09:31	0° Υ	
evening set	-3405 Aug 24 j 10:14	18° \mathcal{Q} 18'13		asc. node	-3400 Jun 16 j 12:00	26° Υ 10'48	
max. Earth dist.	-3405 Sep 09 j 08:58	29° \mathcal{Q} 47'06	2.45041 AU		-3400 Jun 22 j 11:45	0° \mathcal{B}	
	-3405 Sep 09 j 16:03	0° \mathcal{M}			-3400 Aug 09 j 21:46	0° Π	
					-3400 Oct 01 j 01:52	0° \mathcal{S}	
					-3400 Dec 08 j 16:41	0° \mathcal{Q}	
conjunction	-3405 Oct 17 j 15:11	28° \mathcal{M} 14'28	0°11'00				
minimum elong	-3405 Oct 17 j 15:54	28° \mathcal{M} 15'50	0°11'00				
behind sun begin	-3405 Oct 16 j 21:39	27° \mathcal{M} 41'14					
behind sun end	-3405 Oct 18 j 10:09	28° \mathcal{M} 50'27					
	-3405 Oct 19 j 22:46	0° \mathcal{A}					
desc. node	-3405 Nov 02 j 09:15	10° \mathcal{A} 16'27					
	-3405 Nov 27 j 20:05	0° \mathcal{M}					
morning rise	-3405 Dec 17 j 20:05	15° \mathcal{M} 38'59					
	-3404 Jan 05 j 03:28	0° \mathcal{J}					
	-3404 Feb 12 j 17:45	0° \mathcal{Z}					
	-3404 Mar 23 j 12:21	0° \approx					
	-3404 May 04 j 09:14	0° \mathcal{K}					
	-3404 Jun 18 j 13:18	0° Υ					
	-3404 Aug 09 j 02:46	0° \mathcal{B}					
asc. node	-3404 Sep 11 j 12:52	15° \mathcal{B} 09'43					
retrograde	-3404 Oct 21 j 12:44	23° \mathcal{B} 33'26					
opposition	-3404 Nov 30 j 11:30	13° \mathcal{B} 48'25	2°48'05				
greatest brilliancy	-3404 Nov 30 j 08:11	13° \mathcal{B} 51'45	-1.3m				
min. Earth dist.	-3404 Nov 29 j 22:53	14° \mathcal{B} 01'06	0.67031 AU				
direct	-3403 Jan 09 j 19:03	4° \mathcal{B} 04'37					
	-3403 Mar 31 j 07:34	0° Π					
	-3403 May 23 j 04:50	0° \mathcal{S}					
	-3403 Jul 08 j 14:35	0° \mathcal{Q}					
	-3403 Aug 20 j 07:11	0° \mathcal{M}					
desc. node	-3403 Sep 19 j 06:43	22° \mathcal{M} 14'58					
	-3403 Sep 29 j 11:20	0° \mathcal{A}					
evening set	-3403 Oct 18 j 14:09	14° \mathcal{A} 44'11					
	-3403 Nov 07 j 02:58	0° \mathcal{M}					
	-3403 Dec 15 j 05:04	0° \mathcal{J}					
conjunction	-3403 Dec 21 j 21:26	5° \mathcal{J} 15'16	0°-56'-43				
minimum elong	-3403 Dec 21 j 18:27	5° \mathcal{J} 09'25	0°56'50				
	-3402 Jan 22 j 15:55	0° \mathcal{Z}					
max. Earth dist.	-3402 Jan 30 j 14:21	6° \mathcal{Z} 05'38	2.38840 AU				
morning rise	-3402 Feb 27 j 21:41	27° \mathcal{Z} 27'34					
	-3402 Mar 03 j 07:53	0° \approx					
	-3402 Apr 13 j 21:36	0° \mathcal{K}					
	-3402 May 27 j 22:25	0° Υ					
	-3402 Jul 14 j 02:19	0° \mathcal{B}					
asc. node	-3402 Jul 30 j 13:22	9° \mathcal{B} 52'04					
	-3402 Sep 04 j 15:30	0° Π					
retrograde	-3402 Nov 25 j 22:23	27° Π 12'12					
opposition	-3401 Jan 03 j 22:03	18° Π 05'16	4°32'21				
greatest brilliancy	-3401 Jan 04 j 12:22	17° Π 51'08	-1.3m				
min. Earth dist.	-3401 Jan 07 j 05:10	16° Π 47'17	0.65507 AU				
direct	-3401 Feb 14 j 02:45	8° Π 03'59					
	-3401 Apr 25 j 20:06	0° \mathcal{S}					
	-3401 Jun 16 j 08:56	0° \mathcal{Q}					
	-3401 Jul 30 j 13:03	0° \mathcal{M}					
desc. node	-3401 Aug 07 j 05:14	5° \mathcal{M} 30'50					
	-3401 Sep 09 j 04:53	0° \mathcal{A}					
	-3401 Oct 18 j 00:38	0° \mathcal{M}					
	-3401 Nov 25 j 05:31	0° \mathcal{J}					
evening set	-3401 Dec 26 j 11:48	24° \mathcal{J} 20'35					

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 1

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

conjunction	-3400 Feb 27 j 07:22	11° \approx 21'54	0°-56'-37		-3396 Nov 17 j 22:19	0° \mathfrak{M}	
minimum elong	-3400 Feb 27 j 09:37	11° \approx 25'59	0°56'43		-3395 Jan 03 j 14:26	0° \mathfrak{L}	
	-3400 Mar 24 j 11:40	0° \mathfrak{H}			-3395 Feb 21 j 15:01	0° \mathfrak{M}	
max. Earth dist.	-3400 Apr 07 j 02:49	9° \mathfrak{H} 28'31	2.51668 AU	desc. node	-3395 Mar 29 j 05:24	18° \mathfrak{M} 44'32	
morning rise	-3400 Apr 25 j 10:43	21° \mathfrak{H} 59'01			-3395 May 01 j 05:56	0° \mathfrak{J}	
	-3400 May 07 j 09:31	0° \mathfrak{Y}		retrograde	-3395 May 16 j 19:17	1° \mathfrak{J} 31'49	
asc. node	-3400 Jun 16 j 12:00	26° \mathfrak{Y} 10'48			-3395 Jun 01 j 05:59	30° $\mathfrak{R}\mathfrak{M}$	
	-3400 Jun 22 j 11:45	0° \mathfrak{B}		min. Earth dist.	-3395 Jun 14 j 20:11	26° \mathfrak{M} 46'25	0.37691 AU
	-3400 Aug 09 j 21:46	0° \mathfrak{II}		opposition	-3395 Jun 16 j 10:58	26° \mathfrak{M} 20'31	-5°-18'-57
	-3400 Oct 01 j 01:52	0° \mathfrak{S}		greatest brilliancy	-3395 Jun 16 j 00:09	26° \mathfrak{M} 27'45	-2.9m
	-3400 Dec 08 j 16:41	0° \mathfrak{Q}		direct	-3395 Jul 16 j 08:03	21° \mathfrak{M} 21'59	
retrograde	-3399 Jan 04 j 19:50	3° \mathfrak{Q} 58'12			-3395 Aug 23 j 21:23	0° \mathfrak{J}	
	-3399 Jan 29 j 21:27	30° $\mathfrak{R}\mathfrak{S}$			-3395 Oct 19 j 14:50	0° \mathfrak{Z}	
opposition	-3399 Feb 10 j 16:01	25° \mathfrak{S} 55'10	4°57'40		-3395 Dec 06 j 09:22	0° \approx	
greatest brilliancy	-3399 Feb 12 j 06:09	25° \mathfrak{S} 19'23	-1.7m		-3394 Jan 22 j 02:09	0° \mathfrak{H}	
min. Earth dist.	-3399 Feb 17 j 14:26	23° \mathfrak{S} 19'35	0.57614 AU	asc. node	-3394 Feb 06 j 04:34	9° \mathfrak{H} 40'06	
direct	-3399 Mar 22 j 23:15	16° \mathfrak{S} 18'37			-3394 Mar 10 j 03:01	0° \mathfrak{Y}	
	-3399 May 13 j 03:21	0° \mathfrak{Q}			-3394 Apr 26 j 13:44	0° \mathfrak{B}	
desc. node	-3399 Jun 24 j 04:16	23° \mathfrak{Q} 23'58		evening set	-3394 May 19 j 20:45	14° \mathfrak{B} 43'28	
	-3399 Jul 04 j 10:51	0° \mathfrak{M}			-3394 Jun 12 j 21:56	0° \mathfrak{II}	
	-3399 Aug 16 j 10:18	0° \mathfrak{L}		max. Earth dist.	-3394 Jun 25 j 03:03	7° \mathfrak{II} 48'23	2.66226 AU
	-3399 Sep 25 j 07:37	0° \mathfrak{M}					
	-3399 Nov 03 j 05:40	0° \mathfrak{J}		conjunction	-3394 Jul 05 j 11:04	14° \mathfrak{II} 26'32	1°05'32
	-3399 Dec 12 j 11:44	0° \mathfrak{Z}		minimum elong	-3394 Jul 05 j 10:10	14° \mathfrak{II} 25'05	1°05'40
	-3398 Jan 21 j 23:55	0° \approx			-3394 Jul 29 j 11:16	0° \mathfrak{S}	
evening set	-3398 Feb 23 j 13:06	23° \approx 11'59		morning rise	-3394 Aug 19 j 15:14	13° \mathfrak{S} 54'16	
	-3398 Mar 05 j 07:25	0° \mathfrak{H}			-3394 Sep 12 j 18:19	0° \mathfrak{Q}	
					-3394 Oct 26 j 15:49	0° \mathfrak{M}	
conjunction	-3398 Apr 18 j 14:43	0° \mathfrak{Y} 01'21	0°-9'-8		-3394 Dec 08 j 07:06	0° \mathfrak{L}	
minimum elong	-3398 Apr 18 j 15:09	0° \mathfrak{Y} 02'03	0°09'10		-3393 Jan 19 j 00:57	0° \mathfrak{M}	
behind sun begin	-3398 Apr 17 j 21:22	29° \mathfrak{H} 32'33		desc. node	-3393 Feb 14 j 05:45	18° \mathfrak{M} 57'11	
behind sun end	-3398 Apr 19 j 08:57	0° \mathfrak{Y} 31'33			-3393 Mar 01 j 14:05	0° \mathfrak{J}	
	-3398 Apr 18 j 13:55	0° \mathfrak{Y}			-3393 Apr 13 j 13:24	0° \mathfrak{Z}	
asc. node	-3398 May 04 j 09:45	10° \mathfrak{Y} 26'23			-3393 Jun 02 j 16:42	0° \approx	
max. Earth dist.	-3398 May 08 j 10:41	13° \mathfrak{Y} 05'00	2.61778 AU	retrograde	-3393 Jul 21 j 00:39	13° \approx 44'27	
	-3398 Jun 03 j 13:19	0° \mathfrak{B}		min. Earth dist.	-3393 Aug 18 j 08:27	8° \approx 14'49	0.46743 AU
morning rise	-3398 Jun 07 j 14:20	2° \mathfrak{B} 35'43		greatest brilliancy	-3393 Aug 24 j 13:41	6° \approx 04'22	-2.3m
	-3398 Jul 20 j 18:53	0° \mathfrak{II}		opposition	-3393 Aug 26 j 10:32	5° \approx 24'46	-5°-14'-47
	-3398 Sep 07 j 00:42	0° \mathfrak{S}			-3393 Sep 14 j 05:32	30° $\mathfrak{R}\mathfrak{Z}$	
	-3398 Oct 26 j 21:43	0° \mathfrak{Q}		direct	-3393 Sep 28 j 08:41	28° \mathfrak{Z} 39'10	
	-3398 Dec 20 j 21:19	0° \mathfrak{M}			-3393 Oct 13 j 00:13	0° \approx	
retrograde	-3397 Feb 28 j 22:34	21° \mathfrak{M} 14'20		asc. node	-3393 Dec 25 j 03:32	29° \approx 53'16	
opposition	-3397 Apr 03 j 01:15	14° \mathfrak{M} 58'32	2°22'35		-3393 Dec 25 j 08:33	0° \mathfrak{H}	
greatest brilliancy	-3397 Apr 04 j 05:16	14° \mathfrak{M} 36'01	-2.4m		-3392 Feb 16 j 02:32	0° \mathfrak{Y}	
min. Earth dist.	-3397 Apr 11 j 07:26	12° \mathfrak{M} 20'08	0.44971 AU		-3392 Apr 06 j 00:20	0° \mathfrak{B}	
direct	-3397 May 09 j 05:12	7° \mathfrak{M} 23'22			-3392 May 24 j 09:54	0° \mathfrak{II}	
desc. node	-3397 May 12 j 03:39	7° \mathfrak{M} 26'55		evening set	-3392 Jun 26 j 03:00	20° \mathfrak{II} 51'59	
	-3397 Jul 13 j 14:05	0° \mathfrak{L}			-3392 Jul 10 j 04:00	0° \mathfrak{S}	
	-3397 Aug 28 j 22:11	0° \mathfrak{M}		max. Earth dist.	-3392 Jul 19 j 19:17	6° \mathfrak{S} 20'16	2.60433 AU
	-3397 Oct 09 j 19:10	0° \mathfrak{J}					
	-3397 Nov 20 j 00:50	0° \mathfrak{Z}		conjunction	-3392 Aug 12 j 05:10	21° \mathfrak{S} 59'04	1°08'23
	-3396 Jan 01 j 02:08	0° \approx		minimum elong	-3392 Aug 12 j 05:53	22° \mathfrak{S} 00'17	1°08'30
	-3396 Feb 13 j 14:54	0° \mathfrak{H}			-3392 Aug 23 j 23:53	0° \mathfrak{Q}	
asc. node	-3396 Mar 21 j 07:27	24° \mathfrak{H} 27'32		morning rise	-3392 Sep 29 j 00:08	25° \mathfrak{Q} 06'52	
	-3396 Mar 29 j 18:14	0° \mathfrak{Y}			-3392 Oct 05 j 20:40	0° \mathfrak{M}	
evening set	-3396 Apr 10 j 01:14	7° \mathfrak{Y} 21'47			-3392 Nov 16 j 00:14	0° \mathfrak{L}	
	-3396 May 15 j 03:38	0° \mathfrak{B}			-3392 Dec 25 j 21:53	0° \mathfrak{M}	
				desc. node	-3391 Jan 01 j 04:28	4° \mathfrak{M} 46'20	
conjunction	-3396 May 28 j 19:59	8° \mathfrak{B} 45'07	0°36'49		-3391 Feb 03 j 05:20	0° \mathfrak{J}	
minimum elong	-3396 May 28 j 18:48	8° \mathfrak{B} 43'13	0°36'53		-3391 Mar 14 j 19:45	0° \mathfrak{Z}	
max. Earth dist.	-3396 Jun 01 j 15:21	11° \mathfrak{B} 11'00	2.66718 AU		-3391 Apr 25 j 00:35	0° \approx	
	-3396 Jul 01 j 03:30	0° \mathfrak{II}			-3391 Jun 09 j 08:18	0° \mathfrak{H}	
morning rise	-3396 Jul 13 j 20:22	8° \mathfrak{II} 06'07			-3391 Aug 12 j 04:21	0° \mathfrak{Y}	
	-3396 Aug 17 j 02:05	0° \mathfrak{S}		retrograde	-3391 Sep 02 j 15:02	2° \mathfrak{Y} 55'38	
	-3396 Oct 02 j 15:21	0° \mathfrak{Q}			-3391 Sep 22 j 20:55	30° $\mathfrak{R}\mathfrak{H}$	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 2

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

min. Earth dist.	-3391 Oct 06 j 08:56	25° K 19'26	0.58697 AU		-3386 Oct 25 j 18:02	0° M	
opposition	-3391 Oct 12 j 00:14	23° K 05'40	-1°-16'-37	evening set	-3386 Nov 29 j 08:19	27° M 13'49	
greatest brilliancy	-3391 Oct 11 j 15:24	23° K 14'24	-1.7m		-3386 Dec 02 j 20:50	0° J	
asc. node	-3391 Nov 11 j 04:14	14° K 52'51			-3385 Jan 10 j 08:59	0° Z	
direct	-3391 Nov 17 j 21:23	14° K 35'04					
	-3390 Jan 14 j 23:11	0° Y		conjunction	-3385 Feb 02 j 19:42	17° Z 50'39	-1°-6'-26
	-3390 Mar 14 j 15:45	0° B		minimum elong	-3385 Feb 02 j 20:39	17° Z 52'26	1°06'34
	-3390 May 04 j 18:46	0° II			-3385 Feb 19 j 02:52	0° \approx	
	-3390 Jun 21 j 11:26	0° S		max. Earth dist.	-3385 Mar 21 j 21:41	22° \approx 20'13	2.46585 AU
	-3390 Aug 05 j 09:19	0° Q			-3385 Apr 01 j 17:43	0° K	
evening set	-3390 Aug 06 j 08:17	0° Q 39'30		morning rise	-3385 Apr 06 j 07:59	3° K 13'10	
max. Earth dist.	-3390 Aug 21 j 21:50	11° Q 29'02	2.49960 AU		-3385 May 15 j 14:23	0° Y	
	-3390 Sep 16 j 20:07	0° M			-3385 Jun 30 j 22:09	0° B	
				asc. node	-3385 Jul 04 j 03:41	2° B 01'46	
conjunction	-3390 Sep 26 j 12:51	7° M 04'33	0°35'06		-3385 Aug 19 j 07:39	0° II	
minimum elong	-3390 Sep 26 j 14:32	7° M 07'38	0°35'08		-3385 Oct 14 j 08:48	0° S	
	-3390 Oct 27 j 06:43	0° A		retrograde	-3385 Dec 19 j 20:00	19° S 06'27	
desc. node	-3390 Nov 19 j 02:39	17° A 26'05		opposition	-3384 Jan 26 j 16:19	10° S 34'22	5°00'31
morning rise	-3390 Nov 21 j 15:17	19° A 22'54		greatest brilliancy	-3384 Jan 27 j 21:41	10° S 06'06	-1.5m
	-3390 Dec 05 j 08:35	0° M		min. Earth dist.	-3384 Feb 01 j 06:20	8° S 25'39	0.61436 AU
	-3389 Jan 12 j 20:12	0° J		direct	-3384 Mar 07 j 14:38	0° S 40'44	
	-3389 Feb 20 j 13:59	0° Z			-3384 May 28 j 20:13	0° Q	
	-3389 Apr 01 j 12:30	0° \approx		desc. node	-3384 Jul 10 j 21:27	27° Q 13'58	
	-3389 May 13 j 17:56	0° K			-3384 Jul 14 j 22:32	0° M	
	-3389 Jun 29 j 00:50	0° Y			-3384 Aug 25 j 14:12	0° A	
	-3389 Aug 25 j 08:27	0° B			-3384 Oct 03 j 21:11	0° M	
asc. node	-3389 Sep 29 j 04:36	9° B 50'02			-3384 Nov 11 j 09:49	0° J	
retrograde	-3389 Oct 09 j 02:15	10° B 27'11			-3384 Dec 20 j 07:44	0° Z	
min. Earth dist.	-3389 Nov 16 j 03:12	1° B 21'56	0.65883 AU		-3383 Jan 29 j 12:10	0° \approx	
opposition	-3389 Nov 18 j 03:16	0° B 33'31	1°51'36	evening set	-3383 Feb 02 j 03:23	2° \approx 39'04	
greatest brilliancy	-3389 Nov 17 j 21:42	0° B 39'08	-1.3m		-3383 Mar 12 j 12:48	0° K	
	-3389 Nov 19 j 12:37	30° R Y					
direct	-3389 Dec 27 j 17:42	21° Y 04'16		conjunction	-3383 Mar 31 j 08:08	12° K 58'24	0°-28'-56
	-3388 Feb 08 j 08:55	0° B		minimum elong	-3383 Mar 31 j 09:34	13° K 00'51	0°28'58
	-3388 Apr 11 j 00:17	0° II			-3383 Apr 25 j 14:13	0° Y	
	-3388 May 31 j 10:57	0° S		max. Earth dist.	-3383 Apr 27 j 13:54	1° Y 19'18	2.58403 AU
	-3388 Jul 16 j 04:35	0° Q		asc. node	-3383 May 21 j 01:30	16° Y 46'21	
	-3388 Aug 27 j 17:07	0° M		morning rise	-3383 May 22 j 21:57	17° Y 58'41	
evening set	-3388 Sep 24 j 17:57	20° M 46'53			-3383 Jun 10 j 12:39	0° B	
desc. node	-3388 Oct 06 j 00:26	29° M 19'44			-3383 Jul 28 j 01:10	0° II	
	-3388 Oct 06 j 21:33	0° A			-3383 Sep 15 j 06:52	0° S	
max. Earth dist.	-3388 Nov 01 j 12:09	19° A 45'34	2.38219 AU		-3383 Nov 07 j 02:59	0° Q	
	-3388 Nov 14 j 14:37	0° M			-3382 Jan 23 j 00:07	0° M	
				retrograde	-3382 Feb 04 j 19:46	0° M 58'15	
conjunction	-3388 Nov 24 j 06:31	7° M 35'08	0°-33'-38		-3382 Feb 17 j 05:49	30° R Q	
minimum elong	-3388 Nov 24 j 03:56	7° M 30'03	0°33'41	opposition	-3382 Mar 11 j 15:56	23° Q 53'54	3°57'48
	-3388 Dec 22 j 17:54	0° J		greatest brilliancy	-3382 Mar 13 j 09:41	23° Q 17'28	-2.0m
	-3387 Jan 30 j 04:55	0° Z		min. Earth dist.	-3382 Mar 20 j 02:35	20° Q 58'19	0.50203 AU
morning rise	-3387 Jan 31 j 02:44	0° Z 42'02		direct	-3382 Apr 19 j 00:11	15° Q 14'18	
	-3387 Mar 10 j 20:18	0° \approx		desc. node	-3382 May 28 j 21:34	24° Q 32'50	
	-3387 Apr 21 j 10:27	0° K			-3382 Jun 09 j 17:58	0° M	
	-3387 Jun 04 j 16:44	0° Y			-3382 Jul 29 j 15:25	0° A	
	-3387 Jul 22 j 19:45	0° B			-3382 Sep 09 j 17:22	0° M	
asc. node	-3387 Aug 16 j 03:53	13° B 47'31			-3382 Oct 19 j 20:21	0° J	
	-3387 Sep 17 j 21:31	0° II			-3382 Nov 28 j 23:41	0° Z	
retrograde	-3387 Nov 11 j 20:40	14° II 12'54			-3381 Jan 09 j 05:23	0° \approx	
opposition	-3387 Dec 21 j 08:19	4° II 48'24	3°59'19		-3381 Feb 21 j 03:25	0° K	
greatest brilliancy	-3387 Dec 21 j 14:10	4° II 42'34	-1.3m	evening set	-3381 Mar 25 j 03:33	21° K 35'28	
min. Earth dist.	-3387 Dec 23 j 03:23	4° II 05'32	0.66873 AU		-3381 Apr 06 j 20:19	0° Y	
	-3386 Jan 02 j 23:12	30° R B		asc. node	-3381 Apr 07 j 22:08	0° Y 42'31	
direct	-3386 Jan 31 j 08:45	24° B 50'25					
	-3386 Mar 03 j 11:53	0° II		conjunction	-3381 May 14 j 13:58	24° Y 34'37	0°20'36
	-3386 May 07 j 15:57	0° S		minimum elong	-3381 May 14 j 13:11	24° Y 33'20	0°20'37
	-3386 Jun 25 j 06:32	0° Q			-3381 May 23 j 00:11	0° B	
	-3386 Aug 07 j 15:45	0° M		max. Earth dist.	-3381 May 24 j 04:46	0° B 45'56	2.65437 AU
desc. node	-3386 Aug 23 j 21:58	11° M 52'20		morning rise	-3381 Jun 30 j 17:47	24° B 44'32	
	-3386 Sep 17 j 01:05	0° A			-3381 Jul 09 j 00:20	0° II	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 3

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3381 Aug 25 j 07:27	0°☿		direct	-3376 Oct 30 j 19:57	28°≈33'11	
	-3381 Oct 11 j 18:17	0°♈			-3376 Nov 15 j 08:46	0°♏	
	-3381 Nov 28 j 22:34	0°♐		asc. node	-3376 Nov 27 j 19:01	2°♏55'12	
	-3380 Jan 18 j 22:57	0°♑			-3375 Jan 29 j 01:45	0°♑	
	-3380 Mar 31 j 17:56	0°♒			-3375 Mar 23 j 14:53	0°♑	
retrograde	-3380 Apr 14 j 15:47	1°♒11'07			-3375 May 12 j 08:36	0°♒	
desc. node	-3380 Apr 14 j 21:15	1°♒11'05			-3375 Jun 28 j 13:56	0°☿	
	-3380 Apr 28 j 13:52	30°♒♑		evening set	-3375 Jul 20 j 15:00	14°☿33'13	
opposition	-3380 May 15 j 08:52	26°♑03'04	-2°-11'-29	max. Earth dist.	-3375 Aug 07 j 12:31	26°☿38'50	2.54532 AU
greatest brilliancy	-3380 May 15 j 17:51	25°♑56'53	-2.8m		-3375 Aug 12 j 09:57	0°♈	
min. Earth dist.	-3380 May 19 j 02:31	25°♑01'37	0.38688 AU				
direct	-3380 Jun 15 j 23:33	20°♑28'21		conjunction	-3375 Sep 07 j 16:07	18°♈19'29	0°52'58
	-3380 Jul 25 j 22:43	0°♒		minimum elong	-3375 Sep 07 j 17:47	18°♈22'26	0°53'02
	-3380 Sep 17 j 20:36	0°♑			-3375 Sep 23 j 23:44	0°♐	
	-3380 Nov 02 j 05:35	0°♑		morning rise	-3375 Oct 29 j 15:41	26°♐14'17	
	-3380 Dec 16 j 14:02	0°≈			-3375 Nov 03 j 16:02	0°♑	
	-3379 Jan 30 j 14:00	0°♏		desc. node	-3375 Dec 05 j 19:56	24°♑28'11	
asc. node	-3379 Feb 22 j 20:20	15°♏14'04			-3375 Dec 13 j 00:20	0°♒	
	-3379 Mar 17 j 15:46	0°♑			-3374 Jan 20 j 18:00	0°♑	
	-3379 May 03 j 13:57	0°♑			-3374 Feb 28 j 17:20	0°♑	
evening set	-3379 May 04 j 20:06	0°♑47'57			-3374 Apr 09 j 22:36	0°≈	
max. Earth dist.	-3379 Jun 16 j 02:37	27°♑41'45	2.67058 AU		-3374 May 22 j 19:04	0°♏	
	-3379 Jun 19 j 17:17	0°♒			-3374 Jul 10 j 05:42	0°♑	
				retrograde	-3374 Sep 25 j 09:26	26°♑47'58	
conjunction	-3379 Jun 20 j 23:26	0°♒48'08	0°57'01	asc. node	-3374 Oct 15 j 19:20	23°♑54'43	
minimum elong	-3379 Jun 20 j 22:13	0°♒46'11	0°57'07	min. Earth dist.	-3374 Oct 31 j 21:26	18°♑13'55	0.63781 AU
morning rise	-3379 Aug 05 j 03:00	29°♒50'54		opposition	-3374 Nov 04 j 08:46	16°♑50'09	0°46'11
	-3379 Aug 05 j 08:36	0°☿		greatest brilliancy	-3374 Nov 04 j 04:53	16°♑54'04	-1.4m
	-3379 Sep 20 j 00:44	0°♈		direct	-3374 Dec 13 j 01:49	7°♑39'43	
	-3379 Nov 03 j 14:49	0°♐			-3373 Feb 24 j 16:15	0°♑	
	-3379 Dec 17 j 07:16	0°♑			-3373 Apr 21 j 05:26	0°♒	
	-3378 Jan 29 j 12:47	0°♒			-3373 Jun 09 j 05:57	0°☿	
desc. node	-3378 Mar 02 j 21:56	22°♒15'34			-3373 Jul 24 j 13:27	0°♈	
	-3378 Mar 14 j 10:06	0°♑		evening set	-3373 Sep 04 j 12:02	29°♈38'05	
	-3378 May 02 j 01:00	0°♑			-3373 Sep 05 j 00:05	0°♐	
retrograde	-3378 Jun 28 j 22:20	18°♑40'54		max. Earth dist.	-3373 Sep 22 j 18:53	13°♐05'10	2.42294 AU
min. Earth dist.	-3378 Jul 25 j 16:20	13°♑58'58	0.41982 AU		-3373 Oct 15 j 06:03	0°♑	
greatest brilliancy	-3378 Jul 31 j 03:20	12°♑16'07	-2.6m	desc. node	-3373 Oct 23 j 17:56	6°♑29'39	
opposition	-3378 Aug 02 j 03:45	11°♑37'46	-6°-25'-2				
direct	-3378 Sep 02 j 06:09	5°♑46'46		conjunction	-3373 Oct 30 j 19:41	11°♑56'08	0°-5'00
	-3378 Nov 14 j 09:42	0°≈		minimum elong	-3373 Oct 30 j 19:19	11°♑55'26	0°05'02
	-3377 Jan 06 j 07:40	0°♏		behind sun begin	-3373 Oct 29 j 18:51	11°♑08'18	
asc. node	-3377 Jan 10 j 19:36	2°♏40'54		behind sun end	-3373 Oct 31 j 19:47	12°♑42'36	
	-3377 Feb 24 j 21:00	0°♑			-3373 Nov 23 j 01:37	0°♒	
	-3377 Apr 14 j 12:57	0°♑			-3373 Dec 31 j 07:09	0°♑	
	-3377 Jun 01 j 09:56	0°♒		morning rise	-3372 Jan 02 j 22:53	2°♑04'59	
evening set	-3377 Jun 12 j 03:55	6°♒50'08			-3372 Feb 07 j 19:42	0°♑	
max. Earth dist.	-3377 Jul 10 j 08:34	24°♒59'28	2.63312 AU		-3372 Mar 18 j 12:08	0°≈	
	-3377 Jul 18 j 00:48	0°☿			-3372 Apr 29 j 05:05	0°♏	
					-3372 Jun 12 j 21:53	0°♑	
conjunction	-3377 Jul 28 j 17:13	7°☿01'20	1°10'57		-3372 Aug 01 j 17:21	0°♑	
minimum elong	-3377 Jul 28 j 17:13	7°☿01'19	1°11'05	asc. node	-3372 Sep 01 j 19:33	15°♑50'12	
	-3377 Aug 31 j 23:54	0°♈			-3372 Oct 13 j 23:46	0°♒	
morning rise	-3377 Sep 12 j 23:22	8°♈11'59		retrograde	-3372 Oct 29 j 05:51	1°♒23'06	
	-3377 Oct 14 j 04:33	0°♐			-3372 Nov 12 j 15:49	30°♒♑	
	-3377 Nov 24 j 19:19	0°♑		opposition	-3372 Dec 08 j 01:58	21°♑44'25	3°16'48
	-3376 Jan 04 j 05:47	0°♒		greatest brilliancy	-3372 Dec 08 j 01:12	21°♑45'11	-1.3m
desc. node	-3376 Jan 18 j 22:05	11°♒01'19		min. Earth dist.	-3372 Dec 08 j 08:51	21°♑37'31	0.67260 AU
	-3376 Feb 13 j 03:08	0°♑		direct	-3371 Jan 17 j 17:04	11°♑54'35	
	-3376 Mar 24 j 10:38	0°♑			-3371 Mar 22 j 23:32	0°♒	
	-3376 May 05 j 22:53	0°≈			-3371 May 17 j 10:41	0°☿	
	-3376 Jun 24 j 19:44	0°♏			-3371 Jul 03 j 12:34	0°♈	
retrograde	-3376 Aug 17 j 17:59	15°♏59'58			-3371 Aug 15 j 10:51	0°♐	
min. Earth dist.	-3376 Sep 18 j 11:36	9°♏08'42	0.54420 AU	desc. node	-3371 Sep 09 j 16:53	18°♐38'18	
greatest brilliancy	-3376 Sep 24 j 10:32	6°♏51'09	-1.9m		-3371 Sep 24 j 16:59	0°♑	
opposition	-3376 Sep 25 j 08:57	6°♏29'33	-2°-46'-20	evening set	-3371 Nov 02 j 02:45	29°♑48'02	
	-3376 Oct 16 j 05:46	30°♒≈			-3371 Nov 02 j 08:50	0°♒	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 4

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3371 Dec 10 j 10:39	0°♊		morning rise	-3366 Jun 16 j 04:58	11°♊05'23	
					-3366 Jul 15 j 23:57	0°♊	
conjunction	-3370 Jan 06 j 18:02	21°♊23'02	-1°-4'-21		-3366 Sep 01 j 19:41	0°♊	
minimum elong	-3370 Jan 06 j 16:13	21°♊19'31	1°04'29		-3366 Oct 20 j 14:36	0°♊	
	-3370 Jan 17 j 21:08	0°♊			-3366 Dec 11 j 02:52	0°♊	
max. Earth dist.	-3370 Feb 24 j 09:41	28°♊25'38	2.41344 AU		-3365 Feb 15 j 02:23	0°♊	
	-3370 Feb 26 j 12:34	0°♊		retrograde	-3365 Mar 16 j 08:29	4°♊41'01	
morning rise	-3370 Mar 14 j 09:20	11°♊38'32			-3365 Apr 13 j 16:02	30°♊	
	-3370 Apr 09 j 01:23	0°♊		opposition	-3365 Apr 17 j 09:46	28°♊52'59	1°00'13
	-3370 May 22 j 22:57	0°♊		greatest brilliancy	-3365 Apr 17 j 21:35	28°♊44'00	-2.6m
	-3370 Jul 08 j 16:42	0°♊		min. Earth dist.	-3365 Apr 24 j 17:52	26°♊39'19	0.42309 AU
asc. node	-3370 Jul 20 j 18:20	7°♊23'55		desc. node	-3365 May 02 j 14:11	24°♊30'49	
	-3370 Aug 28 j 16:34	0°♊		direct	-3365 May 22 j 02:06	22°♊00'46	
	-3370 Nov 02 j 17:21	0°♊			-3365 Jun 26 j 23:48	0°♊	
retrograde	-3370 Dec 04 j 08:25	5°♊17'23			-3365 Aug 20 j 01:49	0°♊	
	-3369 Jan 02 j 05:50	30°♊			-3365 Oct 02 j 19:39	0°♊	
opposition	-3369 Jan 11 j 23:36	26°♊21'36	4°46'17		-3365 Nov 13 j 23:56	0°♊	
greatest brilliancy	-3369 Jan 12 j 19:08	26°♊02'29	-1.4m		-3365 Dec 26 j 15:17	0°♊	
min. Earth dist.	-3369 Jan 16 j 02:24	24°♊45'00	0.64335 AU		-3364 Feb 08 j 13:39	0°♊	
direct	-3369 Feb 22 j 03:53	16°♊21'10		asc. node	-3364 Mar 11 j 12:35	21°♊12'33	
	-3369 Apr 16 j 02:12	0°♊			-3364 Mar 24 j 23:13	0°♊	
	-3369 Jun 10 j 03:08	0°♊		evening set	-3364 Apr 19 j 06:37	16°♊22'49	
	-3369 Jul 25 j 02:34	0°♊			-3364 May 10 j 12:15	0°♊	
desc. node	-3369 Jul 28 j 15:03	2°♊29'30					
	-3369 Sep 04 j 01:53	0°♊		conjunction	-3364 Jun 06 j 08:37	17°♊08'15	0°45'07
	-3369 Oct 13 j 01:06	0°♊		minimum elong	-3364 Jun 06 j 07:20	17°♊06'13	0°45'10
	-3369 Nov 20 j 08:10	0°♊		max. Earth dist.	-3364 Jun 07 j 00:09	17°♊33'02	2.67066 AU
	-3369 Dec 29 j 00:41	0°♊			-3364 Jun 26 j 12:40	0°♊	
evening set	-3368 Jan 10 j 01:42	9°♊10'17		morning rise	-3364 Jul 21 j 22:43	16°♊15'11	
	-3368 Feb 06 j 23:16	0°♊			-3364 Aug 12 j 07:59	0°♊	
					-3364 Sep 27 j 12:32	0°♊	
conjunction	-3368 Mar 10 j 22:45	23°♊47'38	0°-47'-36		-3364 Nov 12 j 02:01	0°♊	
minimum elong	-3368 Mar 11 j 00:59	23°♊51'35	0°47'40		-3364 Dec 27 j 09:32	0°♊	
	-3368 Mar 19 j 18:22	0°♊			-3363 Feb 11 j 09:56	0°♊	
max. Earth dist.	-3368 Apr 15 j 08:19	18°♊20'10	2.54230 AU	desc. node	-3363 Mar 19 j 14:41	22°♊08'55	
	-3368 May 02 j 16:00	0°♊			-3363 Apr 02 j 18:13	0°♊	
morning rise	-3368 May 05 j 22:05	2°♊10'02		retrograde	-3363 Jun 02 j 11:53	19°♊26'28	
asc. node	-3368 Jun 06 j 17:15	22°♊59'28		min. Earth dist.	-3363 Jun 29 j 21:15	14°♊58'31	0.38531 AU
	-3368 Jun 17 j 15:19	0°♊		greatest brilliancy	-3363 Jul 03 j 01:02	14°♊05'29	-2.8m
	-3368 Aug 04 j 14:56	0°♊		opposition	-3363 Jul 04 j 06:11	13°♊45'01	-6°-18'-50
	-3368 Sep 24 j 09:39	0°♊		direct	-3363 Aug 03 j 03:23	8°♊38'32	
	-3368 Nov 22 j 09:38	0°♊			-3363 Oct 08 j 06:59	0°♊	
retrograde	-3367 Jan 15 j 07:45	13°♊30'20			-3363 Nov 29 j 02:59	0°♊	
opposition	-3367 Feb 20 j 12:47	5°♊46'00	4°45'02		-3362 Jan 16 j 06:24	0°♊	
greatest brilliancy	-3367 Feb 22 j 06:14	5°♊07'53	-1.8m	asc. node	-3362 Jan 27 j 10:58	7°♊02'08	
min. Earth dist.	-3367 Feb 28 j 03:26	2°♊58'58	0.55148 AU		-3362 Mar 04 j 23:51	0°♊	
	-3367 Mar 09 j 03:59	30°♊			-3362 Apr 21 j 19:18	0°♊	
direct	-3367 Apr 01 j 07:12	26°♊24'47		evening set	-3362 May 28 j 08:25	23°♊02'31	
	-3367 Apr 25 j 13:41	0°♊			-3362 Jun 08 j 07:27	0°♊	
desc. node	-3367 Jun 14 j 13:42	22°♊39'21		max. Earth dist.	-3362 Jun 30 j 14:12	14°♊15'17	2.65408 AU
	-3367 Jun 26 j 18:34	0°♊					
	-3367 Aug 10 j 04:26	0°♊		conjunction	-3362 Jul 13 j 19:42	22°♊47'54	1°08'45
	-3367 Sep 19 j 15:05	0°♊		minimum elong	-3362 Jul 13 j 19:05	22°♊46'53	1°08'52
	-3367 Oct 28 j 20:51	0°♊			-3362 Jul 24 j 21:13	0°♊	
	-3367 Dec 07 j 08:43	0°♊		morning rise	-3362 Aug 28 j 05:31	22°♊42'59	
	-3366 Jan 17 j 01:29	0°♊			-3362 Sep 08 j 01:20	0°♊	
	-3366 Feb 28 j 12:46	0°♊			-3362 Oct 21 j 16:11	0°♊	
evening set	-3366 Mar 06 j 18:04	4°♊17'00			-3362 Dec 02 j 21:33	0°♊	
	-3366 Apr 13 j 21:38	0°♊			-3361 Jan 13 j 01:56	0°♊	
asc. node	-3366 Apr 24 j 15:28	7°♊05'25		desc. node	-3361 Feb 04 j 14:29	16°♊34'19	
					-3361 Feb 22 j 20:50	0°♊	
conjunction	-3366 Apr 28 j 09:03	9°♊32'26	0°02'12		-3361 Apr 05 j 11:49	0°♊	
minimum elong	-3366 Apr 28 j 08:56	9°♊32'14	0°02'12		-3361 May 21 j 01:55	0°♊	
behind sun begin	-3366 Apr 27 j 12:09	8°♊58'10		retrograde	-3361 Aug 01 j 02:30	26°♊35'59	
behind sun end	-3366 Apr 29 j 05:43	10°♊06'16		min. Earth dist.	-3361 Aug 30 j 16:07	20°♊35'46	0.49566 AU
max. Earth dist.	-3366 May 14 j 09:27	19°♊59'13	2.63297 AU	greatest brilliancy	-3361 Sep 05 j 22:03	18°♊18'39	-2.1m
	-3366 May 29 j 21:33	0°♊		opposition	-3361 Sep 07 j 11:41	17°♊44'01	-4°-22'-2

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 5

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

direct	-3361 Oct 11 j 08:07	10° \approx 30'26			-3356 Nov 09 j 20:55	0° \mathbb{M}	
asc. node	-3361 Dec 15 j 10:33	29° \approx 48'23					
	-3361 Dec 15 j 20:16	0° \mathbb{H}		conjunction	-3356 Dec 09 j 15:55	23° \mathbb{M} 27'04	0°-47'-56
	-3360 Feb 09 j 21:57	0° \mathbb{Y}		minimum elong	-3356 Dec 09 j 12:43	23° \mathbb{M} 20'47	0°48'00
	-3360 Mar 31 j 20:04	0° \mathbb{B}			-3356 Dec 17 j 23:28	0° \mathbb{A}	
	-3360 May 19 j 15:39	0° \mathbb{I}		max. Earth dist.	-3356 Dec 23 j 20:52	4° \mathbb{A} 37'56	2.37599 AU
evening set	-3360 Jul 04 j 19:52	29° \mathbb{I} 30'56			-3355 Jan 25 j 09:54	0° \mathbb{C}	
	-3360 Jul 05 j 13:40	0° \mathbb{S}		morning rise	-3355 Feb 16 j 02:31	16° \mathbb{C} 34'44	
max. Earth dist.	-3360 Jul 26 j 05:23	13° \mathbb{S} 38'24	2.58541 AU		-3355 Mar 06 j 00:30	0° \approx	
	-3360 Aug 19 j 10:01	0° \mathbb{Q}			-3355 Apr 16 j 12:50	0° \mathbb{H}	
					-3355 May 30 j 13:53	0° \mathbb{Y}	
conjunction	-3360 Aug 21 j 10:19	1° \mathbb{Q} 22'49	1°04'28		-3355 Jul 17 j 00:08	0° \mathbb{B}	
minimum elong	-3360 Aug 21 j 11:26	1° \mathbb{Q} 24'44	1°04'35	asc. node	-3355 Aug 06 j 10:14	12° \mathbb{B} 01'18	
	-3360 Oct 01 j 04:32	0° \mathbb{M}			-3355 Sep 08 j 20:53	0° \mathbb{I}	
morning rise	-3360 Oct 09 j 10:16	5° \mathbb{M} 56'08		retrograde	-3355 Nov 19 j 20:40	22° \mathbb{I} 05'09	
	-3360 Nov 11 j 04:06	0° \mathbb{A}		opposition	-3355 Dec 29 j 02:25	12° \mathbb{I} 49'46	4°19'34
	-3360 Dec 20 j 20:30	0° \mathbb{M}		greatest brilliancy	-3355 Dec 29 j 12:44	12° \mathbb{I} 39'33	-1.3m
desc. node	-3360 Dec 22 j 14:35	1° \mathbb{M} 20'28		min. Earth dist.	-3355 Dec 31 j 17:04	11° \mathbb{I} 47'44	0.66249 AU
	-3359 Jan 28 j 21:59	0° \mathbb{A}		direct	-3354 Feb 08 j 06:12	2° \mathbb{I} 49'27	
	-3359 Mar 09 j 05:20	0° \mathbb{C}			-3354 Apr 30 j 11:18	0° \mathbb{S}	
	-3359 Apr 18 j 22:10	0° \approx			-3354 Jun 19 j 16:05	0° \mathbb{Q}	
	-3359 Jun 01 j 22:52	0° \mathbb{H}			-3354 Aug 02 j 12:49	0° \mathbb{M}	
	-3359 Jul 25 j 15:20	0° \mathbb{Y}		desc. node	-3354 Aug 14 j 08:04	8° \mathbb{M} 31'57	
retrograde	-3359 Sep 11 j 04:14	12° \mathbb{Y} 16'31			-3354 Sep 12 j 02:43	0° \mathbb{A}	
min. Earth dist.	-3359 Oct 15 j 23:01	4° \mathbb{Y} 18'21	0.60763 AU		-3354 Oct 20 j 21:29	0° \mathbb{M}	
opposition	-3359 Oct 20 j 20:43	2° \mathbb{Y} 21'03	0°-28'-38		-3354 Nov 28 j 01:07	0° \mathbb{A}	
greatest brilliancy	-3359 Oct 20 j 17:47	2° \mathbb{Y} 23'59	-1.6m	evening set	-3354 Dec 14 j 18:45	13° \mathbb{A} 06'20	
	-3359 Oct 26 j 21:55	30° \mathbb{R} \mathbb{H}			-3353 Jan 05 j 14:03	0° \mathbb{C}	
asc. node	-3359 Nov 01 j 09:53	28° \mathbb{H} 03'06			-3353 Feb 14 j 08:38	0° \approx	
direct	-3359 Nov 27 j 11:20	23° \mathbb{H} 34'31					
	-3358 Jan 01 j 13:29	0° \mathbb{Y}		conjunction	-3353 Feb 17 j 00:29	1° \approx 57'45	-1°-1'-56
	-3358 Mar 08 j 04:45	0° \mathbb{B}		minimum elong	-3353 Feb 17 j 02:25	2° \approx 01'18	1°02'02
	-3358 Apr 29 j 13:16	0° \mathbb{I}			-3353 Mar 27 j 23:52	0° \mathbb{H}	
	-3358 Jun 16 j 16:14	0° \mathbb{S}		max. Earth dist.	-3353 Apr 01 j 11:41	3° \mathbb{H} 08'49	2.49448 AU
	-3358 Jul 31 j 17:51	0° \mathbb{Q}		morning rise	-3353 Apr 18 j 02:01	14° \mathbb{H} 37'51	
evening set	-3358 Aug 16 j 10:05	10° \mathbb{Q} 52'50			-3353 May 10 j 19:40	0° \mathbb{Y}	
max. Earth dist.	-3358 Aug 31 j 15:50	21° \mathbb{Q} 40'33	2.47279 AU	asc. node	-3353 Jun 24 j 09:20	29° \mathbb{Y} 00'58	
	-3358 Sep 12 j 05:00	0° \mathbb{M}			-3353 Jun 25 j 22:34	0° \mathbb{B}	
					-3353 Aug 13 j 15:48	0° \mathbb{I}	
conjunction	-3358 Oct 08 j 03:32	19° \mathbb{M} 07'02	0°22'03		-3353 Oct 06 j 01:03	0° \mathbb{S}	
minimum elong	-3358 Oct 08 j 04:49	19° \mathbb{M} 09'25	0°22'04	retrograde	-3353 Dec 29 j 07:24	27° \mathbb{S} 54'30	
	-3358 Oct 22 j 14:26	0° \mathbb{A}		opposition	-3352 Feb 04 j 15:32	19° \mathbb{S} 37'38	5°00'52
desc. node	-3358 Nov 09 j 12:17	13° \mathbb{A} 41'02		greatest brilliancy	-3352 Feb 06 j 01:54	19° \mathbb{S} 05'00	-1.6m
	-3358 Nov 30 j 14:12	0° \mathbb{M}		min. Earth dist.	-3352 Feb 10 j 23:55	17° \mathbb{S} 13'21	0.59436 AU
morning rise	-3358 Dec 05 j 23:41	4° \mathbb{M} 12'15		direct	-3352 Mar 16 j 06:52	9° \mathbb{S} 52'11	
	-3357 Jan 07 j 23:21	0° \mathbb{A}			-3352 May 19 j 23:44	0° \mathbb{Q}	
	-3357 Feb 15 j 14:36	0° \mathbb{C}		desc. node	-3352 Jul 01 j 07:00	25° \mathbb{Q} 09'47	
greatest brilliancy	-3357 Feb 19 j 15:03	3° \mathbb{C} 04'55	1.2m		-3352 Jul 08 j 14:10	0° \mathbb{M}	
	-3357 Mar 27 j 09:31	0° \approx			-3352 Aug 19 j 23:18	0° \mathbb{A}	
	-3357 May 08 j 07:54	0° \mathbb{H}			-3352 Sep 28 j 14:10	0° \mathbb{M}	
	-3357 Jun 22 j 19:06	0° \mathbb{Y}			-3352 Nov 06 j 07:28	0° \mathbb{A}	
	-3357 Aug 14 j 22:00	0° \mathbb{B}			-3352 Dec 15 j 09:00	0° \mathbb{C}	
asc. node	-3357 Sep 19 j 09:44	14° \mathbb{B} 11'55			-3351 Jan 24 j 16:20	0° \approx	
retrograde	-3357 Oct 16 j 19:55	18° \mathbb{B} 28'32		evening set	-3351 Feb 14 j 13:39	15° \approx 03'09	
opposition	-3357 Nov 25 j 20:39	8° \mathbb{B} 39'01	2°25'38		-3351 Mar 07 j 19:17	0° \mathbb{H}	
min. Earth dist.	-3357 Nov 24 j 15:43	9° \mathbb{B} 08'08	0.66645 AU				
greatest brilliancy	-3357 Nov 25 j 15:50	8° \mathbb{B} 43'53	-1.3m	conjunction	-3351 Apr 10 j 23:17	23° \mathbb{H} 20'43	0°-17'-31
	-3357 Dec 23 j 13:49	30° \mathbb{R} \mathbb{Y}		minimum elong	-3351 Apr 11 j 00:08	23° \mathbb{H} 22'09	0°17'32
direct	-3356 Jan 04 j 21:43	29° \mathbb{Y} 01'17			-3351 Apr 20 j 22:08	0° \mathbb{Y}	
	-3356 Jan 17 j 21:32	0° \mathbb{B}		max. Earth dist.	-3351 May 04 j 02:33	8° \mathbb{Y} 43'31	2.60361 AU
	-3356 Apr 04 j 07:32	0° \mathbb{I}		asc. node	-3351 May 11 j 06:54	13° \mathbb{Y} 26'14	
	-3356 May 26 j 02:53	0° \mathbb{S}		morning rise	-3351 Jun 01 j 00:40	26° \mathbb{Y} 54'29	
	-3356 Jul 11 j 07:00	0° \mathbb{Q}			-3351 Jun 05 j 19:57	0° \mathbb{B}	
	-3356 Aug 22 j 22:58	0° \mathbb{M}			-3351 Jul 23 j 03:23	0° \mathbb{I}	
desc. node	-3356 Sep 26 j 09:39	25° \mathbb{M} 36'21			-3351 Sep 09 j 17:51	0° \mathbb{S}	
	-3356 Oct 02 j 04:14	0° \mathbb{A}			-3351 Oct 30 j 15:26	0° \mathbb{Q}	
evening set	-3356 Oct 07 j 21:05	4° \mathbb{A} 21'53			-3351 Dec 28 j 20:14	0° \mathbb{M}	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 6

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

retrograde	-3350 Feb 17 j 23:40	12° \mathbb{M} 30'40		-3345 Feb 19 j 05:08	0° Υ	
opposition	-3350 Mar 23 j 21:38	5° \mathbb{M} 52'30	3°10'07	-3345 Apr 09 j 12:59	0° \mathcal{B}	
greatest brilliancy	-3350 Mar 25 j 09:49	5° \mathbb{M} 22'15	-2.2m	-3345 May 27 j 17:09	0° \mathbb{I}	
min. Earth dist.	-3350 Apr 01 j 10:28	3° \mathbb{M} 02'12	0.47288 AU	-3345 Jun 20 j 16:59	15° \mathbb{I} 16'18	
	-3350 Apr 12 j 00:18	30° \mathcal{R} \mathbb{Q}		-3345 Jul 13 j 10:35	0° \mathfrak{S}	
direct	-3350 Apr 30 j 04:01	27° \mathbb{Q} 45'47		-3345 Jul 16 j 06:20	1° \mathfrak{S} 50'57	2.61822 AU
	-3350 May 18 j 14:36	0° \mathbb{M}				
desc. node	-3350 May 19 j 05:51	0° \mathbb{M} 09'05		conjunction	-3345 Aug 06 j 11:36	15° \mathfrak{S} 53'44 1°10'05
	-3350 Jul 20 j 19:41	0° \mathfrak{L}		minimum elong	-3345 Aug 06 j 12:00	15° \mathfrak{S} 54'24 1°10'12
	-3350 Sep 02 j 19:30	0° \mathbb{M}			-3345 Aug 27 j 08:50	0° \mathbb{Q}
	-3350 Oct 13 j 18:31	0° \mathcal{X}		morning rise	-3345 Sep 22 j 11:37	18° \mathbb{Q} 03'01
	-3350 Nov 23 j 10:31	0° \mathfrak{Z}			-3345 Oct 09 j 09:55	0° \mathbb{M}
	-3349 Jan 04 j 01:18	0° \approx			-3345 Nov 19 j 19:02	0° \mathfrak{L}
	-3349 Feb 16 j 05:54	0° \mathcal{H}			-3345 Dec 29 j 22:36	0° \mathbb{M}
asc. node	-3349 Mar 29 j 04:38	27° \mathcal{H} 24'21		desc. node	-3344 Jan 09 j 07:16	7° \mathbb{M} 50'27
	-3349 Apr 02 j 03:16	0° Υ			-3344 Feb 07 j 11:41	0° \mathcal{X}
evening set	-3349 Apr 03 j 22:41	1° Υ 11'17			-3344 Mar 18 j 08:17	0° \mathfrak{Z}
	-3349 May 18 j 09:22	0° \mathcal{B}			-3344 Apr 28 j 22:45	0° \approx
					-3344 Jun 14 j 12:26	0° \mathcal{H}
conjunction	-3349 May 23 j 09:42	3° \mathcal{B} 12'58	0°30'18	retrograde	-3344 Aug 26 j 23:35	26° \mathcal{H} 19'32
minimum elong	-3349 May 23 j 08:39	3° \mathcal{B} 11'17	0°30'21	min. Earth dist.	-3344 Sep 28 j 20:23	19° \mathcal{H} 03'08 0.56861 AU
max. Earth dist.	-3349 May 29 j 17:11	7° \mathcal{B} 15'31	2.66252 AU	greatest brilliancy	-3344 Oct 04 j 12:01	16° \mathcal{H} 50'28 -1.8m
	-3349 Jul 04 j 08:51	0° \mathbb{I}		opposition	-3344 Oct 05 j 02:16	16° \mathcal{H} 36'32 -1°-53'-34
morning rise	-3349 Jul 08 j 20:52	2° \mathbb{I} 51'54		direct	-3344 Nov 10 j 08:56	8° \mathcal{H} 20'25
	-3349 Aug 20 j 11:01	0° \mathfrak{S}		asc. node	-3344 Nov 18 j 00:58	8° \mathcal{H} 42'12
	-3349 Oct 06 j 09:07	0° \mathbb{Q}			-3343 Jan 20 j 17:10	0° Υ
	-3349 Nov 22 j 09:23	0° \mathbb{M}			-3343 Mar 17 j 19:51	0° \mathcal{B}
	-3348 Jan 09 j 12:57	0° \mathfrak{L}			-3343 May 07 j 08:14	0° \mathbb{I}
	-3348 Mar 02 j 17:39	0° \mathbb{M}			-3343 Jun 23 j 20:57	0° \mathfrak{S}
desc. node	-3348 Apr 05 j 07:28	13° \mathbb{M} 54'24		evening set	-3343 Jul 30 j 00:31	24° \mathfrak{S} 00'11
retrograde	-3348 May 02 j 22:36	18° \mathbb{M} 22'44			-3343 Aug 07 j 19:19	0° \mathbb{Q}
opposition	-3348 Jun 02 j 06:32	13° \mathbb{M} 21'09	-4°-5'-58	max. Earth dist.	-3343 Aug 15 j 08:59	5° \mathbb{Q} 13'18 2.52079 AU
greatest brilliancy	-3348 Jun 02 j 08:41	13° \mathbb{M} 19'44	-2.9m			
min. Earth dist.	-3348 Jun 03 j 03:40	13° \mathbb{M} 07'09	0.37731 AU	conjunction	-3343 Sep 18 j 03:21	29° \mathbb{Q} 07'16 0°43'32
direct	-3348 Jul 02 j 14:50	8° \mathbb{M} 14'41		minimum elong	-3343 Sep 18 j 05:07	29° \mathbb{Q} 10'27 0°43'34
	-3348 Sep 05 j 21:02	0° \mathcal{X}			-3343 Sep 19 j 08:32	0° \mathbb{M}
	-3348 Oct 25 j 08:57	0° \mathfrak{Z}			-3343 Oct 29 j 22:28	0° \mathfrak{L}
	-3348 Dec 10 j 07:35	0° \approx		morning rise	-3343 Nov 11 j 05:56	9° \mathfrak{L} 19'52
	-3347 Jan 25 j 03:19	0° \mathcal{H}		desc. node	-3343 Nov 26 j 05:31	20° \mathfrak{L} 48'11
asc. node	-3347 Feb 13 j 02:05	12° \mathcal{H} 16'30			-3343 Dec 08 j 03:35	0° \mathbb{M}
	-3347 Mar 12 j 16:30	0° Υ			-3342 Jan 15 j 17:40	0° \mathcal{X}
	-3347 Apr 28 j 21:02	0° \mathcal{B}			-3342 Feb 23 j 13:15	0° \mathfrak{Z}
evening set	-3347 May 13 j 12:05	9° \mathcal{B} 16'18			-3342 Apr 04 j 13:20	0° \approx
	-3347 Jun 15 j 02:55	0° \mathbb{I}			-3342 May 16 j 22:27	0° \mathcal{H}
max. Earth dist.	-3347 Jun 21 j 10:51	4° \mathbb{I} 02'28	2.66707 AU		-3342 Jul 02 j 20:10	0° Υ
					-3342 Sep 03 j 08:03	0° \mathcal{B}
conjunction	-3347 Jun 29 j 06:42	9° \mathbb{I} 03'00	1°02'24	retrograde	-3342 Oct 03 j 07:13	5° \mathcal{B} 09'18
minimum elong	-3347 Jun 29 j 05:38	9° \mathbb{I} 01'18	1°02'30	asc. node	-3342 Oct 06 j 01:35	5° \mathcal{B} 06'11
	-3347 Jul 31 j 17:32	0° \mathfrak{S}			-3342 Oct 31 j 00:05	30° \mathcal{R} Υ
morning rise	-3347 Aug 13 j 08:58	8° \mathfrak{S} 15'26		min. Earth dist.	-3342 Nov 09 j 16:16	26° Υ 17'47 0.65062 AU
	-3347 Sep 15 j 05:06	0° \mathbb{Q}		opposition	-3342 Nov 12 j 08:33	25° Υ 13'07 1°25'25
	-3347 Oct 29 j 10:12	0° \mathbb{M}		greatest brilliancy	-3342 Nov 12 j 03:02	25° Υ 18'40 -1.4m
	-3347 Dec 11 j 12:20	0° \mathfrak{L}		direct	-3342 Dec 21 j 14:32	15° Υ 51'45
	-3346 Jan 22 j 20:13	0° \mathbb{M}			-3341 Feb 15 j 06:55	0° \mathcal{B}
desc. node	-3346 Feb 21 j 08:31	20° \mathbb{M} 57'38			-3341 Apr 15 j 07:24	0° \mathbb{I}
	-3346 Mar 06 j 04:57	0° \mathcal{X}			-3341 Jun 04 j 03:57	0° \mathfrak{S}
	-3346 Apr 19 j 18:00	0° \mathfrak{Z}			-3341 Jul 19 j 18:37	0° \mathbb{Q}
	-3346 Jun 18 j 02:49	0° \approx			-3341 Aug 31 j 07:35	0° \mathbb{M}
retrograde	-3346 Jul 11 j 22:33	3° \approx 47'54		evening set	-3341 Sep 16 j 05:34	11° \mathbb{M} 41'23
	-3346 Aug 04 j 05:19	30° \mathcal{R} \mathfrak{Z}			-3341 Oct 10 j 13:42	0° \mathfrak{L}
min. Earth dist.	-3346 Aug 08 j 09:51	28° \mathfrak{Z} 41'19	0.44513 AU	max. Earth dist.	-3341 Oct 11 j 09:36	0° \mathfrak{L} 37'55 2.39817 AU
greatest brilliancy	-3346 Aug 14 j 09:58	26° \mathfrak{Z} 40'42	-2.4m	desc. node	-3341 Oct 14 j 03:30	2° \mathfrak{L} 43'41
opposition	-3346 Aug 16 j 10:14	25° \mathfrak{Z} 59'50	-5°-50'-40			
direct	-3346 Sep 17 j 13:02	19° \mathfrak{Z} 38'23		conjunction	-3341 Nov 13 j 19:43	26° \mathfrak{L} 27'33 0°-21'-25
	-3346 Oct 31 j 16:53	0° \approx		minimum elong	-3341 Nov 13 j 18:02	26° \mathfrak{L} 24'15 0°21'27
	-3346 Dec 30 j 01:29	0° \mathcal{H}			-3341 Nov 18 j 08:23	0° \mathbb{M}
asc. node	-3345 Jan 01 j 00:49	1° \mathcal{H} 07'07			-3341 Dec 26 j 12:31	0° \mathcal{X}

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 7

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

morning rise	-3340 Jan 19 j 08:30	18° ♄ 39'34		min. Earth dist.	-3335 Mar 11 j 05:39	13° ♄ 16'32	0.52489 AU
	-3340 Feb 02 j 23:36	0° ♄		direct	-3335 Apr 11 j 03:39	7° ♄ 10'19	
	-3340 Mar 13 j 14:20	0° \approx		desc. node	-3335 Jun 05 j 00:09	23° ♄ 15'53	
	-3340 Apr 24 j 03:55	0° ♄			-3335 Jun 17 j 13:40	0° ♄	
	-3340 Jun 07 j 12:19	0° ♄			-3335 Aug 03 j 09:48	0° ♄	
	-3340 Jul 26 j 03:03	0° ♄			-3335 Sep 13 j 16:00	0° ♄	
asc. node	-3340 Aug 23 j 01:13	15° ♄ 17'32			-3335 Oct 23 j 07:59	0° ♄	
	-3340 Sep 24 j 11:51	0° ♄			-3335 Dec 02 j 02:55	0° ♄	
retrograde	-3340 Nov 06 j 00:43	9° ♄ 11'41			-3334 Jan 12 j 01:21	0° \approx	
	-3340 Dec 14 j 21:17	30° ♄			-3334 Feb 23 j 16:59	0° ♄	
opposition	-3340 Dec 15 j 16:59	29° ♄ 40'20	3°42'36	evening set	-3334 Mar 17 j 10:52	14° ♄ 48'27	
greatest brilliancy	-3340 Dec 15 j 19:35	29° ♄ 37'45	-1.3m		-3334 Apr 09 j 05:06	0° ♄	
min. Earth dist.	-3340 Dec 16 j 19:31	29° ♄ 13'51	0.67170 AU	asc. node	-3334 Apr 14 j 19:56	3° ♄ 42'30	
direct	-3339 Jan 25 j 14:21	19° ♄ 45'35					
	-3339 Mar 12 j 09:37	0° ♄		conjunction	-3334 May 07 j 18:54	18° ♄ 42'43	0°13'05
	-3339 May 11 j 06:57	0° ♄		minimum elong	-3334 May 07 j 18:21	18° ♄ 41'50	0°13'07
	-3339 Jun 28 j 06:09	0° ♄		behind sun begin	-3334 May 07 j 06:50	18° ♄ 23'09	
	-3339 Aug 10 j 11:45	0° ♄		behind sun end	-3334 May 08 j 05:53	19° ♄ 00'32	
desc. node	-3339 Aug 31 j 01:13	15° ♄ 04'18		max. Earth dist.	-3334 May 20 j 03:53	26° ♄ 43'01	2.64591 AU
	-3339 Sep 19 j 20:40	0° ♄			-3334 May 25 j 06:15	0° ♄	
	-3339 Oct 28 j 13:41	0° ♄		morning rise	-3334 Jun 24 j 14:45	19° ♄ 24'46	
evening set	-3339 Nov 17 j 08:11	15° ♄ 33'35			-3334 Jul 11 j 06:47	0° ♄	
	-3339 Dec 05 j 15:56	0° ♄			-3334 Aug 27 j 18:51	0° ♄	
	-3338 Jan 13 j 02:49	0° ♄			-3334 Oct 14 j 17:57	0° ♄	
conjunction	-3338 Jan 22 j 06:29	7° ♄ 01'33	-1°-7'-15		-3334 Dec 03 j 02:26	0° ♄	
minimum elong	-3338 Jan 22 j 06:20	7° ♄ 01'16	1°07'23	retrograde	-3333 Jan 26 j 16:39	0° ♄	
	-3338 Feb 21 j 18:37	0° \approx		desc. node	-3333 Apr 01 j 22:11	19° ♄ 28'33	
max. Earth dist.	-3338 Mar 12 j 10:32	13° \approx 40'31	2.44210 AU	opposition	-3333 Apr 23 j 00:03	16° ♄ 49'04	
morning rise	-3338 Mar 27 j 18:01	24° \approx 39'49		greatest brilliancy	-3333 May 03 j 03:57	14° ♄ 05'26	0°-42'-42
	-3338 Apr 04 j 07:03	0° ♄		min. Earth dist.	-3333 May 08 j 19:25	12° ♄ 28'24	0.40058 AU
	-3338 May 18 j 02:29	0° ♄		direct	-3333 Jun 05 j 02:32	7° ♄ 58'05	
	-3338 Jul 03 j 12:20	0° ♄			-3333 Aug 08 j 11:34	0° ♄	
asc. node	-3338 Jul 11 j 00:59	4° ♄ 41'19			-3333 Sep 24 j 22:09	0° ♄	
	-3338 Aug 22 j 09:54	0° ♄			-3333 Nov 07 j 12:51	0° ♄	
	-3338 Oct 20 j 01:29	0° ♄			-3333 Dec 20 j 23:38	0° \approx	
retrograde	-3338 Dec 13 j 00:48	13° ♄ 32'05			-3332 Feb 03 j 09:53	0° ♄	
opposition	-3337 Jan 20 j 06:35	4° ♄ 48'40	4°55'56	asc. node	-3332 Mar 01 j 17:59	18° ♄ 02'12	
greatest brilliancy	-3337 Jan 21 j 07:31	4° ♄ 24'28	-1.4m		-3332 Mar 20 j 03:05	0° ♄	
min. Earth dist.	-3337 Jan 25 j 04:58	2° ♄ 54'01	0.62855 AU	evening set	-3332 Apr 28 j 06:43	25° ♄ 10'05	
	-3337 Feb 02 j 02:58	30° ♄			-3332 May 05 j 20:23	0° ♄	
direct	-3337 Mar 02 j 08:56	24° ♄ 51'04		max. Earth dist.	-3332 Jun 12 j 09:17	23° ♄ 54'56	2.67173 AU
	-3337 Apr 01 j 18:39	0° ♄					
	-3337 Jun 03 j 07:33	0° ♄		conjunction	-3332 Jun 14 j 18:45	25° ♄ 26'32	0°52'25
desc. node	-3337 Jul 19 j 00:04	29° ♄ 42'01		minimum elong	-3332 Jun 14 j 17:29	25° ♄ 24'30	0°52'30
	-3337 Jul 19 j 10:25	0° ♄			-3332 Jun 21 j 22:12	0° ♄	
	-3337 Aug 29 j 19:12	0° ♄		morning rise	-3332 Jul 30 j 01:28	24° ♄ 27'12	
	-3337 Oct 07 j 22:56	0° ♄			-3332 Aug 07 j 15:33	0° ♄	
	-3337 Nov 15 j 08:41	0° ♄			-3332 Sep 22 j 13:15	0° ♄	
	-3337 Dec 24 j 03:27	0° ♄			-3332 Nov 06 j 13:23	0° ♄	
evening set	-3336 Jan 24 j 01:02	23° ♄ 15'49			-3332 Dec 20 j 21:17	0° ♄	
	-3336 Feb 02 j 04:15	0° \approx			-3331 Feb 03 j 02:45	0° ♄	
	-3336 Mar 15 j 01:05	0° ♄		desc. node	-3331 Mar 10 j 00:40	23° ♄ 06'31	
					-3331 Mar 20 j 20:45	0° ♄	
conjunction	-3336 Mar 22 j 20:12	5° ♄ 25'40	0°-37'-9		-3331 May 16 j 05:27	0° ♄	
minimum elong	-3336 Mar 22 j 22:03	5° ♄ 28'52	0°37'12	retrograde	-3331 Jun 18 j 00:18	6° ♄ 46'45	
max. Earth dist.	-3336 Apr 22 j 16:38	26° ♄ 27'40	2.56637 AU	min. Earth dist.	-3331 Jul 14 j 15:07	2° ♄ 17'36	0.40187 AU
	-3336 Apr 27 j 23:35	0° ♄		greatest brilliancy	-3331 Jul 19 j 07:10	0° ♄ 54'22	-2.7m
morning rise	-3336 May 15 j 19:37	11° ♄ 48'11		opposition	-3331 Jul 21 j 02:10	0° ♄ 22'13	-6°-36'-9
asc. node	-3336 May 27 j 23:19	19° ♄ 44'13			-3331 Jul 22 j 08:06	30° ♄	
	-3336 Jun 12 j 21:01	0° ♄		direct	-3331 Aug 20 j 11:15	24° ♄ 54'19	
	-3336 Jul 30 j 12:52	0° ♄			-3331 Sep 18 j 21:11	0° ♄	
	-3336 Sep 18 j 07:31	0° ♄			-3331 Nov 20 j 16:38	0° \approx	
	-3336 Nov 12 j 01:09	0° ♄			-3330 Jan 10 j 01:13	0° ♄	
retrograde	-3335 Jan 26 j 13:10	23° ♄ 34'28		asc. node	-3330 Jan 17 j 17:13	4° ♄ 41'52	
opposition	-3335 Mar 03 j 01:21	16° ♄ 11'07	4°22'14		-3330 Feb 27 j 16:45	0° ♄	
greatest brilliancy	-3335 Mar 04 j 20:04	15° ♄ 32'53	-1.9m		-3330 Apr 16 j 22:46	0° ♄	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 9

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

direct	-3320 Mar 25 j 07:20	19° \mathfrak{G} 29'48		evening set	-3315 May 22 j 01:10	17° \mathfrak{B} 38'00	
	-3320 May 08 j 04:57	0° \mathfrak{Q}			-3315 Jun 10 j 12:39	0° \mathfrak{H}	
desc. node	-3320 Jun 21 j 16:16	23° \mathfrak{Q} 43'19		max. Earth dist.	-3315 Jun 26 j 20:00	10° \mathfrak{H} 25'08	2.66089 AU
	-3320 Jul 01 j 14:51	0° \mathfrak{M}					
	-3320 Aug 14 j 00:57	0° \mathfrak{A}		conjunction	-3315 Jul 07 j 14:25	17° \mathfrak{H} 20'26	1°06'33
	-3320 Sep 23 j 02:24	0° \mathfrak{M}		minimum elong	-3315 Jul 07 j 13:36	17° \mathfrak{H} 19'06	1°06'39
	-3320 Nov 01 j 02:00	0° \mathfrak{A}			-3315 Jul 27 j 03:12	0° \mathfrak{G}	
	-3320 Dec 10 j 08:11	0° \mathfrak{Z}		morning rise	-3315 Aug 21 j 19:24	16° \mathfrak{G} 52'37	
	-3319 Jan 19 j 19:32	0° \mathfrak{A}			-3315 Sep 10 j 11:03	0° \mathfrak{Q}	
evening set	-3319 Feb 26 j 07:01	26° \mathfrak{A} 40'40			-3315 Oct 24 j 08:36	0° \mathfrak{M}	
	-3319 Mar 03 j 01:37	0° \mathfrak{H}			-3315 Dec 05 j 22:54	0° \mathfrak{A}	
	-3319 Apr 16 j 06:29	0° \mathfrak{Y}			-3314 Jan 16 j 14:32	0° \mathfrak{M}	
				desc. node	-3314 Feb 11 j 16:56	18° \mathfrak{M} 57'10	
conjunction	-3319 Apr 21 j 02:14	3° \mathfrak{Y} 11'59	0°-6'-4		-3314 Feb 26 j 23:16	0° \mathfrak{A}	
minimum elong	-3319 Apr 21 j 02:30	3° \mathfrak{Y} 12'26	0°06'04		-3314 Apr 10 j 12:20	0° \mathfrak{Z}	
behind sun begin	-3319 Apr 20 j 06:30	2° \mathfrak{Y} 39'19			-3314 May 28 j 20:45	0° \mathfrak{A}	
behind sun end	-3319 Apr 21 j 22:31	3° \mathfrak{Y} 45'32		retrograde	-3314 Jul 23 j 17:46	17° \mathfrak{A} 37'09	
asc. node	-3319 May 01 j 12:45	10° \mathfrak{Y} 05'04		min. Earth dist.	-3314 Aug 21 j 08:43	12° \mathfrak{A} 00'59	0.47292 AU
max. Earth dist.	-3319 May 10 j 06:29	15° \mathfrak{Y} 48'18	2.62076 AU	greatest brilliancy	-3314 Aug 27 j 13:57	9° \mathfrak{A} 48'57	-2.2m
	-3319 Jun 01 j 04:14	0° \mathfrak{B}		opposition	-3314 Aug 29 j 09:23	9° \mathfrak{A} 10'12	-5°-2'-34
morning rise	-3319 Jun 09 j 20:15	5° \mathfrak{B} 33'52		direct	-3314 Oct 01 j 10:52	2° \mathfrak{A} 18'58	
	-3319 Jul 18 j 07:58	0° \mathfrak{H}			-3314 Dec 21 j 18:08	0° \mathfrak{H}	
	-3319 Sep 04 j 10:36	0° \mathfrak{G}		asc. node	-3314 Dec 22 j 07:43	0° \mathfrak{H} 17'47	
	-3319 Oct 23 j 23:48	0° \mathfrak{Q}			-3313 Feb 13 j 06:35	0° \mathfrak{Y}	
	-3319 Dec 16 j 19:29	0° \mathfrak{M}			-3313 Apr 04 j 10:32	0° \mathfrak{B}	
retrograde	-3318 Mar 04 j 08:07	24° \mathfrak{M} 58'50			-3313 May 22 j 23:32	0° \mathfrak{H}	
opposition	-3318 Apr 06 j 04:54	18° \mathfrak{M} 48'14	2°04'09	evening set	-3313 Jun 29 j 07:13	23° \mathfrak{H} 47'32	
greatest brilliancy	-3318 Apr 07 j 05:40	18° \mathfrak{M} 28'30	-2.4m		-3313 Jul 08 j 20:21	0° \mathfrak{G}	
min. Earth dist.	-3318 Apr 14 j 07:45	16° \mathfrak{M} 13'32	0.44456 AU	max. Earth dist.	-3313 Jul 22 j 10:09	8° \mathfrak{G} 55'32	2.60108 AU
desc. node	-3318 May 09 j 16:22	11° \mathfrak{M} 22'50					
direct	-3318 May 12 j 03:40	11° \mathfrak{M} 20'17		conjunction	-3313 Aug 15 j 10:58	25° \mathfrak{G} 01'19	1°07'30
	-3318 Jul 09 j 08:34	0° \mathfrak{A}		minimum elong	-3313 Aug 15 j 11:47	25° \mathfrak{G} 02'41	1°07'36
	-3318 Aug 26 j 00:55	0° \mathfrak{M}			-3313 Aug 22 j 18:29	0° \mathfrak{Q}	
	-3318 Oct 07 j 06:35	0° \mathfrak{A}		morning rise	-3313 Oct 02 j 10:57	28° \mathfrak{Q} 23'47	
	-3318 Nov 17 j 15:29	0° \mathfrak{Z}			-3313 Oct 04 j 16:54	0° \mathfrak{M}	
	-3318 Dec 29 j 17:47	0° \mathfrak{A}			-3313 Nov 14 j 21:13	0° \mathfrak{A}	
	-3317 Feb 11 j 06:28	0° \mathfrak{H}			-3313 Dec 24 j 18:43	0° \mathfrak{M}	
asc. node	-3317 Mar 19 j 10:00	24° \mathfrak{H} 06'41		desc. node	-3313 Dec 30 j 17:00	4° \mathfrak{M} 30'45	
	-3317 Mar 28 j 09:23	0° \mathfrak{Y}			-3312 Feb 02 j 00:57	0° \mathfrak{A}	
evening set	-3317 Apr 13 j 09:58	10° \mathfrak{Y} 26'24			-3312 Mar 12 j 12:45	0° \mathfrak{Z}	
	-3317 May 13 j 18:26	0° \mathfrak{B}			-3312 Apr 22 j 12:14	0° \mathfrak{A}	
					-3312 Jun 06 j 06:13	0° \mathfrak{H}	
conjunction	-3317 Jun 01 j 01:25	11° \mathfrak{B} 41'53	0°39'14		-3312 Aug 03 j 23:49	0° \mathfrak{Y}	
minimum elong	-3317 Jun 01 j 00:12	11° \mathfrak{B} 39'56	0°39'18	retrograde	-3312 Sep 04 j 19:33	6° \mathfrak{Y} 05'33	
max. Earth dist.	-3317 Jun 04 j 03:07	13° \mathfrak{B} 39'32	2.66806 AU		-3312 Oct 04 j 16:09	30° \mathfrak{R} \mathfrak{H}	
	-3317 Jun 29 j 18:06	0° \mathfrak{H}		min. Earth dist.	-3312 Oct 08 j 18:40	28° \mathfrak{H} 25'34	0.59129 AU
morning rise	-3317 Jul 16 j 23:34	10° \mathfrak{H} 59'31		opposition	-3312 Oct 14 j 07:31	26° \mathfrak{H} 14'11	-1°-3'-12
	-3317 Aug 15 j 16:15	0° \mathfrak{G}		greatest brilliancy	-3312 Oct 14 j 00:20	26° \mathfrak{H} 21'17	-1.7m
	-3317 Oct 01 j 04:06	0° \mathfrak{Q}		asc. node	-3312 Nov 08 j 06:51	18° \mathfrak{H} 38'18	
	-3317 Nov 16 j 07:34	0° \mathfrak{M}		direct	-3312 Nov 20 j 09:11	17° \mathfrak{H} 40'19	
	-3316 Jan 01 j 15:51	0° \mathfrak{A}			-3311 Jan 10 j 05:07	0° \mathfrak{Y}	
	-3316 Feb 18 j 19:29	0° \mathfrak{M}			-3311 Mar 11 j 15:43	0° \mathfrak{B}	
desc. node	-3316 Mar 26 j 17:18	20° \mathfrak{M} 21'12			-3311 May 02 j 04:41	0° \mathfrak{H}	
	-3316 Apr 18 j 05:04	0° \mathfrak{A}			-3311 Jun 19 j 02:26	0° \mathfrak{G}	
retrograde	-3316 May 20 j 12:46	6° \mathfrak{A} 14'22			-3311 Aug 03 j 03:51	0° \mathfrak{Q}	
min. Earth dist.	-3316 Jun 18 j 06:09	1° \mathfrak{A} 33'33	0.37786 AU	evening set	-3311 Aug 08 j 17:59	3° \mathfrak{Q} 50'47	
opposition	-3316 Jun 20 j 10:03	0° \mathfrak{A} 58'32	-5°-36'-31	max. Earth dist.	-3311 Aug 24 j 02:04	14° \mathfrak{Q} 32'50	2.49488 AU
greatest brilliancy	-3316 Jun 19 j 19:46	1° \mathfrak{A} 08'11	-2.9m		-3311 Sep 14 j 17:15	0° \mathfrak{M}	
	-3316 Jun 24 j 01:28	30° \mathfrak{R} \mathfrak{M}					
direct	-3316 Jul 20 j 06:55	25° \mathfrak{M} 59'36		conjunction	-3311 Sep 29 j 04:29	10° \mathfrak{M} 33'51	0°32'01
	-3316 Aug 14 j 17:00	0° \mathfrak{A}		minimum elong	-3311 Sep 29 j 06:05	10° \mathfrak{M} 36'49	0°32'03
	-3316 Oct 16 j 01:47	0° \mathfrak{Z}			-3311 Oct 25 j 05:32	0° \mathfrak{A}	
	-3316 Dec 03 j 13:35	0° \mathfrak{A}		desc. node	-3311 Nov 16 j 15:21	17° \mathfrak{A} 05'33	
	-3315 Jan 19 j 12:08	0° \mathfrak{H}		morning rise	-3311 Nov 24 j 18:41	23° \mathfrak{A} 22'08	
asc. node	-3315 Feb 03 j 08:10	9° \mathfrak{H} 28'23			-3311 Dec 03 j 08:10	0° \mathfrak{M}	
	-3315 Mar 07 j 15:18	0° \mathfrak{Y}			-3310 Jan 10 j 19:29	0° \mathfrak{A}	
	-3315 Apr 24 j 03:17	0° \mathfrak{B}			-3310 Feb 18 j 11:51	0° \mathfrak{Z}	

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3310 Mar 30 j 07:38	0°♊			-3305 May 26 j 12:47	0°♈	
	-3310 May 11 j 08:14	0°♋		desc. node	-3305 Jul 09 j 09:49	27°♈16'43	
	-3310 Jun 26 j 04:56	0°♌			-3305 Jul 13 j 10:15	0°♎	
	-3310 Aug 20 j 14:16	0°♍			-3305 Aug 24 j 08:42	0°♏	
asc. node	-3310 Sep 26 j 06:39	11°♌58'07			-3305 Oct 02 j 18:40	0°♐	
retrograde	-3310 Oct 11 j 02:12	13°♌19'29			-3305 Nov 10 j 08:16	0°♑	
min. Earth dist.	-3310 Nov 18 j 07:29	4°♌11'37	0.66064 AU		-3305 Dec 19 j 05:50	0°♒	
opposition	-3310 Nov 20 j 04:28	3°♌26'23	2°01'41		-3304 Jan 28 j 09:01	0°♊	
greatest brilliancy	-3310 Nov 19 j 22:46	3°♌32'07	-1.3m	evening set	-3304 Feb 06 j 02:40	6°♊21'51	
	-3310 Nov 29 j 00:23	30°♌			-3304 Mar 10 j 07:53	0°♋	
direct	-3310 Dec 29 j 22:24	23°♌55'21					
	-3309 Feb 02 j 05:15	0°♌		conjunction	-3304 Apr 02 j 23:27	16°♌18'02	0°-25'-56
	-3309 Apr 08 j 23:08	0°♍		minimum elong	-3304 Apr 03 j 00:45	16°♌20'15	0°25'58
	-3309 May 29 j 22:19	0°♎			-3304 Apr 23 j 07:23	0°♏	
	-3309 Jul 14 j 21:49	0°♏		max. Earth dist.	-3304 Apr 29 j 13:42	4°♏09'56	2.58787 AU
	-3309 Aug 26 j 13:51	0°♐		asc. node	-3304 May 18 j 04:28	16°♏24'57	
evening set	-3309 Sep 28 j 16:52	24°♐34'24		morning rise	-3304 May 25 j 05:57	21°♏00'47	
desc. node	-3309 Oct 04 j 12:45	28°♐59'49			-3304 Jun 08 j 03:50	0°♑	
	-3309 Oct 05 j 20:21	0°♑			-3304 Jul 25 j 13:43	0°♒	
max. Earth dist.	-3309 Nov 09 j 17:02	26°♑57'13	2.37943 AU		-3304 Sep 12 j 14:03	0°♓	
	-3309 Nov 13 j 14:27	0°♒			-3304 Nov 03 j 18:08	0°♈	
					-3303 Jan 10 j 06:26	0°♎	
conjunction	-3309 Nov 28 j 15:53	11°♒49'43	0°-37'-12	retrograde	-3303 Feb 07 j 20:00	4°♎25'02	
minimum elong	-3309 Nov 28 j 13:05	11°♒44'12	0°37'15		-3303 Mar 06 j 16:58	30°♒	
	-3309 Dec 21 j 17:45	0°♑		opposition	-3303 Mar 14 j 11:51	27°♒25'50	3°46'30
	-3308 Jan 29 j 03:53	0°♒		greatest brilliancy	-3303 Mar 16 j 04:36	26°♒50'36	-2.1m
morning rise	-3308 Feb 04 j 17:38	5°♒03'43		min. Earth dist.	-3303 Mar 23 j 00:06	24°♒30'13	0.49636 AU
	-3308 Mar 08 j 17:29	0°♓		direct	-3303 Apr 21 j 16:37	18°♒52'07	
	-3308 Apr 19 j 04:49	0°♈		desc. node	-3303 May 26 j 08:32	26°♒07'34	
	-3308 Jun 02 j 06:41	0°♏			-3303 Jun 04 j 14:58	0°♐	
	-3308 Jul 20 j 00:55	0°♑			-3303 Jul 26 j 16:22	0°♒	
asc. node	-3308 Aug 13 j 07:26	13°♑57'12			-3303 Sep 07 j 05:32	0°♓	
	-3308 Sep 13 j 16:33	0°♒			-3303 Oct 17 j 12:51	0°♈	
retrograde	-3308 Nov 13 j 21:36	17°♒01'44			-3303 Nov 26 j 17:49	0°♉	
opposition	-3308 Dec 23 j 09:09	7°♒38'40	4°05'11		-3302 Jan 06 j 23:40	0°♊	
greatest brilliancy	-3308 Dec 23 j 15:47	7°♒32'05	-1.3m		-3302 Feb 18 j 20:58	0°♋	
min. Earth dist.	-3308 Dec 25 j 07:33	6°♒52'34	0.66792 AU	evening set	-3302 Mar 27 j 14:04	24°♋44'29	
	-3307 Jan 14 j 12:28	30°♒			-3302 Apr 04 j 12:51	0°♌	
direct	-3307 Feb 02 j 11:27	27°♒40'18		asc. node	-3302 Apr 05 j 02:27	0°♌22'25	
	-3307 Feb 22 j 18:10	0°♍					
	-3307 May 04 j 14:16	0°♎		conjunction	-3302 May 16 j 19:34	27°♌31'34	0°23'18
	-3307 Jun 22 j 19:26	0°♏		minimum elong	-3302 May 16 j 18:41	27°♌30'09	0°23'22
	-3307 Aug 05 j 10:48	0°♐			-3302 May 20 j 15:49	0°♑	
desc. node	-3307 Aug 21 j 11:00	11°♐38'29		max. Earth dist.	-3302 May 25 j 18:18	3°♑16'42	2.65610 AU
	-3307 Sep 14 j 23:17	0°♑		morning rise	-3302 Jul 02 j 19:53	27°♑34'41	
	-3307 Oct 23 j 17:38	0°♒			-3302 Jul 06 j 15:18	0°♓	
	-3307 Nov 30 j 20:32	0°♈			-3302 Aug 22 j 21:21	0°♉	
evening set	-3307 Dec 02 j 19:36	1°♈32'31			-3302 Oct 09 j 05:26	0°♊	
greatest brilliancy	-3307 Dec 09 j 06:11	6°♈36'07	1.2m		-3302 Nov 26 j 02:39	0°♋	
	-3306 Jan 08 j 07:49	0°♉			-3301 Jan 15 j 06:26	0°♌	
					-3301 Mar 18 j 23:10	0°♍	
conjunction	-3306 Feb 06 j 03:18	21°♉54'19	-1°-5'-37	desc. node	-3301 Apr 13 j 09:53	5°♍26'23	
minimum elong	-3306 Feb 06 j 04:34	21°♉56'42	1°05'44	retrograde	-3301 Apr 19 j 18:47	5°♍41'21	
	-3306 Feb 17 j 00:06	0°♊		opposition	-3301 May 20 j 07:09	0°♍36'26	-2°-38'-57
max. Earth dist.	-3306 Mar 24 j 20:56	25°♊59'57	2.47136 AU	greatest brilliancy	-3301 May 20 j 16:08	0°♍30'22	-2.8m
	-3306 Mar 30 j 12:47	0°♋			-3301 May 22 j 12:57	30°♒	
morning rise	-3306 Apr 09 j 04:55	6°♋46'18		min. Earth dist.	-3301 May 23 j 13:26	29°♒43'29	0.38409 AU
	-3306 May 13 j 06:48	0°♌		direct	-3301 Jun 20 j 14:01	25°♒09'06	
	-3306 Jun 28 j 10:52	0°♍			-3301 Jul 18 j 08:56	0°♎	
asc. node	-3306 Jul 01 j 06:51	1°♍47'15			-3301 Sep 15 j 06:55	0°♏	
	-3306 Aug 16 j 13:04	0°♎			-3301 Oct 31 j 09:24	0°♑	
	-3306 Oct 10 j 12:19	0°♏			-3301 Dec 15 j 00:15	0°♒	
retrograde	-3306 Dec 22 j 03:05	22°♏04'27			-3300 Jan 29 j 02:51	0°♓	
opposition	-3305 Jan 28 j 22:02	13°♏34'57	5°00'28	asc. node	-3300 Feb 21 j 00:03	14°♋58'07	
greatest brilliancy	-3305 Jan 30 j 04:17	13°♏05'56	-1.5m		-3300 Mar 15 j 05:43	0°♌	
min. Earth dist.	-3305 Feb 03 j 15:49	11°♏23'10	0.61088 AU		-3300 May 01 j 04:31	0°♍	
direct	-3305 Mar 10 j 19:58	3°♏42'54		evening set	-3300 May 07 j 01:30	3°♏44'05	

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3300 Jun 17 j 08:30	0° Π		retrograde	-3295 Sep 27 j 10:36	29° Υ 44'18	
max. Earth dist.	-3300 Jun 17 j 17:34	0° Π 14'28	2.67026 AU	asc. node	-3295 Oct 12 j 22:35	28° Υ 04'51	
				min. Earth dist.	-3295 Nov 03 j 03:12	21° Υ 07'17	0.64047 AU
conjunction	-3300 Jun 23 j 02:22	3° Π 40'04	0°58'37	opposition	-3295 Nov 06 j 11:25	19° Υ 46'47	0°57'35
minimum elong	-3300 Jun 23 j 01:12	3° Π 38'12	0°58'42	greatest brilliancy	-3295 Nov 06 j 06:48	19° Υ 51'25	-1.4m
	-3300 Aug 03 j 00:30	0° Ξ		direct	-3295 Dec 15 j 07:56	10° Υ 34'11	
morning rise	-3300 Aug 07 j 05:07	2° Ξ 43'22			-3294 Feb 20 j 18:50	0° Υ	
	-3300 Sep 17 j 16:58	0° Ω			-3294 Apr 18 j 09:36	0° Π	
	-3300 Nov 01 j 06:32	0° η			-3294 Jun 06 j 18:32	0° Ξ	
	-3300 Dec 14 j 21:02	0° $\underline{\Omega}$			-3294 Jul 22 j 06:54	0° Ω	
	-3299 Jan 26 j 22:17	0° \mathbb{M}			-3294 Sep 02 j 20:50	0° η	
desc. node	-3299 Feb 28 j 11:27	22° \mathbb{M} 33'22		evening set	-3294 Sep 07 j 05:00	3° η 09'30	
	-3299 Mar 11 j 09:44	0° \mathcal{A}		max. Earth dist.	-3294 Sep 26 j 04:52	17° η 11'12	2.41821 AU
	-3299 Apr 27 j 14:10	0° Ξ			-3294 Oct 13 j 04:54	0° $\underline{\Omega}$	
retrograde	-3299 Jul 02 j 02:32	22° Ξ 58'08		desc. node	-3294 Oct 21 j 06:40	6° $\underline{\Omega}$ 09'43	
min. Earth dist.	-3299 Jul 28 j 22:27	18° Ξ 11'45	0.42409 AU				
greatest brilliancy	-3299 Aug 03 j 12:14	16° Ξ 25'24	-2.5m	conjunction	-3294 Nov 02 j 22:06	15° $\underline{\Omega}$ 53'34	0°-8'-54
opposition	-3299 Aug 05 j 12:45	15° Ξ 46'23	-6°-19'-19	minimum elong	-3294 Nov 02 j 21:26	15° $\underline{\Omega}$ 52'17	0°08'56
direct	-3299 Sep 05 j 20:33	9° Ξ 49'49		behind sun begin	-3294 Nov 01 j 23:37	15° $\underline{\Omega}$ 10'09	
	-3299 Nov 10 j 03:24	0° \approx		behind sun end	-3294 Nov 03 j 19:14	16° $\underline{\Omega}$ 34'26	
	-3298 Jan 03 j 07:22	0° \mathcal{H}			-3294 Nov 21 j 01:25	0° \mathbb{M}	
asc. node	-3298 Jan 07 j 22:17	2° \mathcal{H} 43'40			-3294 Dec 29 j 06:50	0° \mathcal{A}	
	-3298 Feb 22 j 04:57	0° Υ		morning rise	-3293 Jan 06 j 13:09	6° \mathcal{A} 29'01	
	-3298 Apr 12 j 00:37	0° Υ			-3293 Feb 05 j 18:12	0° Ξ	
	-3298 May 30 j 00:07	0° Π			-3293 Mar 17 j 08:29	0° \approx	
evening set	-3298 Jun 14 j 08:28	9° Π 45'16			-3293 Apr 27 j 22:06	0° \mathcal{H}	
max. Earth dist.	-3298 Jul 11 j 23:27	27° Π 33'51	2.63058 AU		-3293 Jun 11 j 09:14	0° Υ	
	-3298 Jul 15 j 17:05	0° Ξ			-3293 Jul 30 j 15:00	0° Υ	
				asc. node	-3293 Aug 30 j 22:34	16° Υ 23'30	
conjunction	-3298 Jul 30 j 21:59	9° Ξ 59'46	1°10'52		-3293 Oct 04 j 19:37	0° Π	
minimum elong	-3298 Jul 30 j 22:05	9° Ξ 59'56	1°10'58	retrograde	-3293 Nov 01 j 06:00	4° Π 12'04	
	-3298 Aug 29 j 17:53	0° Ω			-3293 Nov 26 j 13:43	30° \mathcal{R}	
morning rise	-3298 Sep 15 j 06:54	11° Ω 20'00		opposition	-3293 Dec 11 j 02:27	24° \mathcal{R} 34'39	3°24'25
	-3298 Oct 11 j 23:40	0° η		greatest brilliancy	-3293 Dec 11 j 02:15	24° \mathcal{R} 34'51	-1.3m
	-3298 Nov 22 j 14:50	0° $\underline{\Omega}$		min. Earth dist.	-3293 Dec 11 j 12:54	24° \mathcal{R} 24'12	0.67268 AU
	-3297 Jan 02 j 00:56	0° \mathbb{M}		direct	-3292 Jan 20 j 20:03	14° \mathcal{R} 43'49	
desc. node	-3297 Jan 16 j 10:06	10° \mathbb{M} 48'37			-3292 Mar 18 j 19:14	0° Π	
	-3297 Feb 10 j 20:50	0° \mathcal{A}			-3292 May 14 j 15:25	0° Ξ	
	-3297 Mar 23 j 00:56	0° Ξ			-3292 Jul 01 j 02:44	0° Ω	
	-3297 May 04 j 04:45	0° \approx			-3292 Aug 13 j 05:52	0° η	
	-3297 Jun 21 j 16:40	0° \mathcal{H}		desc. node	-3292 Sep 07 j 04:15	18° η 20'20	
retrograde	-3297 Aug 21 j 01:19	19° \mathcal{H} 19'39			-3292 Sep 22 j 14:51	0° $\underline{\Omega}$	
min. Earth dist.	-3297 Sep 22 j 00:04	12° \mathcal{H} 24'24	0.54878 AU		-3292 Oct 31 j 08:13	0° \mathbb{M}	
opposition	-3297 Sep 28 j 19:38	9° \mathcal{H} 46'40	-2°-32'-30	evening set	-3292 Nov 05 j 13:06	4° \mathbb{M} 05'08	
greatest brilliancy	-3297 Sep 27 j 23:12	10° \mathcal{H} 06'22	-1.8m		-3292 Dec 08 j 10:24	0° \mathcal{A}	
direct	-3297 Nov 03 j 10:55	1° \mathcal{H} 46'33					
asc. node	-3297 Nov 25 j 22:00	4° \mathcal{H} 41'06		conjunction	-3291 Jan 10 j 07:25	25° \mathcal{A} 43'10	-1°-5'-27
	-3296 Jan 26 j 14:02	0° Υ		minimum elong	-3291 Jan 10 j 05:59	25° \mathcal{A} 40'23	1°05'33
	-3296 Mar 20 j 20:00	0° Υ			-3291 Jan 15 j 20:13	0° Ξ	
	-3296 May 09 j 20:08	0° Π			-3291 Feb 24 j 10:04	0° \approx	
	-3296 Jun 26 j 05:28	0° Ξ		max. Earth dist.	-3291 Feb 28 j 08:01	2° \approx 53'57	2.41868 AU
evening set	-3296 Jul 22 j 22:30	17° Ξ 37'46		morning rise	-3291 Mar 17 j 13:29	15° \approx 30'03	
max. Earth dist.	-3296 Aug 09 j 09:03	29° Ξ 26'44	2.54095 AU		-3291 Apr 06 j 20:29	0° \mathcal{H}	
	-3296 Aug 10 j 04:28	0° Ω			-3291 May 20 j 14:47	0° Υ	
					-3291 Jul 06 j 03:32	0° Υ	
conjunction	-3296 Sep 10 j 03:16	21° Ω 36'43	0°50'44	asc. node	-3291 Jul 17 j 22:06	7° Υ 15'56	
minimum elong	-3296 Sep 10 j 04:57	21° Ω 39'43	0°50'47		-3291 Aug 25 j 15:50	0° Π	
	-3296 Sep 21 j 20:26	0° η			-3291 Oct 27 j 07:10	0° Ξ	
morning rise	-3296 Nov 01 j 11:35	29° η 55'34		retrograde	-3291 Dec 06 j 11:42	8° Ξ 08'53	
	-3296 Nov 01 j 13:57	0° $\underline{\Omega}$			-3290 Jan 12 j 04:02	30° \mathcal{R}	
desc. node	-3296 Dec 03 j 08:27	24° $\underline{\Omega}$ 09'27		opposition	-3290 Jan 14 j 02:12	29° Π 15'08	4°48'57
	-3296 Dec 10 j 22:36	0° \mathbb{M}		greatest brilliancy	-3290 Jan 14 j 22:46	28° Π 55'03	-1.4m
	-3295 Jan 18 j 15:43	0° \mathcal{A}		min. Earth dist.	-3290 Jan 18 j 08:52	27° Π 35'03	0.64081 AU
	-3295 Feb 26 j 13:28	0° Ξ		direct	-3290 Feb 24 j 07:29	19° Π 15'09	
	-3295 Apr 07 j 15:42	0° \approx			-3290 Apr 11 j 08:05	0° Ξ	
	-3295 May 20 j 06:02	0° \mathcal{H}			-3290 Jun 07 j 07:53	0° Ω	
	-3295 Jul 06 j 23:38	0° Υ			-3290 Jul 22 j 17:48	0° η	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 12

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

desc. node	-3290 Jul 26 j 02:35	2°♎22'02		conjunction	-3285 Jun 09 j 13:41	20°♎03'42	0°47'16
	-3290 Sep 01 j 21:34	0°♊		minimum elong	-3285 Jun 09 j 12:25	20°♎01'39	0°47'21
	-3290 Oct 10 j 22:47	0°♌		max. Earth dist.	-3285 Jun 09 j 13:00	20°♎02'36	2.67121 AU
	-3290 Nov 18 j 06:24	0°♍			-3285 Jun 25 j 03:47	0°♎	
	-3290 Dec 26 j 22:26	0°♏		morning rise	-3285 Jul 25 j 01:44	19°♎07'55	
evening set	-3289 Jan 13 j 09:59	13°♏17'33			-3285 Aug 10 j 23:17	0°♏	
	-3289 Feb 04 j 19:50	0°♐			-3285 Sep 26 j 03:17	0°♏	
					-3285 Nov 10 j 14:38	0°♐	
conjunction	-3289 Mar 14 j 21:06	27°♐25'03	0°-45'00		-3285 Dec 25 j 17:14	0°♐	
minimum elong	-3289 Mar 14 j 23:15	27°♐28'50	0°45'03		-3284 Feb 09 j 06:32	0°♑	
	-3289 Mar 18 j 13:16	0°♒		desc. node	-3284 Mar 17 j 03:05	23°♑03'41	
max. Earth dist.	-3289 Apr 18 j 09:19	21°♒15'37	2.54725 AU		-3284 Mar 29 j 02:04	0°♒	
	-3289 May 01 j 08:53	0°♓		retrograde	-3284 Jun 06 j 03:44	24°♒07'00	
morning rise	-3289 May 09 j 10:09	5°♓21'41		min. Earth dist.	-3284 Jul 03 j 05:44	19°♒41'01	0.38786 AU
asc. node	-3289 Jun 04 j 20:46	22°♓40'45		greatest brilliancy	-3284 Jul 06 j 18:24	18°♒41'20	-2.8m
	-3289 Jun 16 j 05:46	0°♈		opposition	-3284 Jul 08 j 02:54	18°♒18'19	-6°-26'-53
	-3289 Aug 03 j 01:37	0°♉		direct	-3284 Aug 07 j 00:00	13°♒08'47	
	-3289 Sep 22 j 11:29	0°♊			-3284 Oct 03 j 12:03	0°♈	
	-3289 Nov 18 j 19:57	0°♋			-3284 Nov 26 j 00:28	0°♉	
retrograde	-3288 Jan 18 j 21:28	16°♋39'28			-3283 Jan 13 j 13:54	0°♊	
opposition	-3288 Feb 24 j 00:32	8°♋58'49	4°39'15	asc. node	-3283 Jan 24 j 14:21	6°♊53'52	
greatest brilliancy	-3288 Feb 25 j 18:16	8°♋20'42	-1.8m		-3283 Mar 02 j 11:03	0°♋	
min. Earth dist.	-3288 Mar 02 j 19:08	6°♋09'17	0.54670 AU		-3283 Apr 19 j 08:21	0°♌	
	-3288 Mar 27 j 21:02	30°♌		evening set	-3283 May 30 j 13:31	25°♌58'07	
direct	-3288 Apr 03 j 17:41	29°♌40'59			-3283 Jun 05 j 22:00	0°♉	
	-3288 Apr 10 j 16:40	0°♍		max. Earth dist.	-3283 Jul 02 j 08:47	16°♉54'57	2.65235 AU
desc. node	-3288 Jun 12 j 02:39	23°♍15'04					
	-3288 Jun 23 j 15:04	0°♎		conjunction	-3283 Jul 16 j 00:01	25°♉44'01	1°09'23
	-3288 Aug 07 j 16:45	0°♏		minimum elong	-3283 Jul 15 j 23:29	25°♉43'10	1°09'29
	-3288 Sep 17 j 08:41	0°♐			-3283 Jul 22 j 13:17	0°♏	
	-3288 Oct 26 j 16:21	0°♑		morning rise	-3283 Aug 30 j 11:00	25°♏44'34	
	-3288 Dec 05 j 04:23	0°♒			-3283 Sep 05 j 18:46	0°♍	
	-3287 Jan 14 j 20:21	0°♓			-3283 Oct 19 j 10:24	0°♎	
	-3287 Feb 26 j 06:25	0°♈			-3283 Nov 30 j 15:42	0°♏	
evening set	-3287 Mar 09 j 10:53	7°♈41'36			-3282 Jan 10 j 18:55	0°♑	
	-3287 Apr 11 j 13:59	0°♉		desc. node	-3282 Feb 02 j 03:15	16°♑28'56	
asc. node	-3287 Apr 21 j 17:31	6°♉42'20			-3282 Feb 20 j 10:59	0°♒	
					-3282 Apr 02 j 19:25	0°♈	
conjunction	-3287 Apr 30 j 19:18	12°♉39'39	0°05'15		-3282 May 17 j 13:50	0°♉	
minimum elong	-3287 Apr 30 j 19:05	12°♉39'18	0°05'17		-3282 Jul 28 j 16:58	0°♊	
behind sun begin	-3287 Apr 29 j 23:13	12°♉06'49		retrograde	-3282 Aug 03 j 15:32	0°♋15'21	
behind sun end	-3287 May 01 j 14:56	13°♉11'45			-3282 Aug 09 j 12:28	30°♋	
max. Earth dist.	-3287 May 16 j 04:22	22°♉40'15	2.63578 AU	min. Earth dist.	-3282 Sep 02 j 11:04	24°♋10'12	0.50075 AU
	-3287 May 27 j 12:45	0°♌		greatest brilliancy	-3282 Sep 08 j 17:51	21°♋51'20	-2.1m
morning rise	-3287 Jun 18 j 09:49	14°♌00'56		opposition	-3282 Sep 10 j 05:49	21°♋18'05	-4°-8'-29
	-3287 Jul 13 j 13:57	0°♍		direct	-3282 Oct 14 j 05:53	13°♋59'53	
	-3287 Aug 30 j 07:31	0°♎			-3282 Dec 11 j 09:33	0°♋	
	-3287 Oct 17 j 21:04	0°♏		asc. node	-3282 Dec 12 j 13:33	0°♌31'54	
	-3287 Dec 07 j 17:40	0°♐			-3281 Feb 06 j 21:44	0°♉	
	-3286 Feb 06 j 22:33	0°♑			-3281 Mar 30 j 04:33	0°♊	
retrograde	-3286 Mar 19 j 21:21	8°♑40'02			-3281 May 18 j 04:19	0°♋	
opposition	-3286 Apr 20 j 19:43	2°♑56'39	0°37'15		-3281 Jul 04 j 05:16	0°♌	
greatest brilliancy	-3286 Apr 21 j 02:56	2°♑51'11	-2.6m	evening set	-3281 Jul 08 j 02:24	2°♌32'05	
min. Earth dist.	-3286 Apr 27 j 20:47	0°♑49'33	0.41860 AU	max. Earth dist.	-3281 Jul 28 j 23:04	16°♌20'14	2.58149 AU
desc. node	-3286 Apr 30 j 02:36	0°♒10'50			-3281 Aug 18 j 03:58	0°♍	
	-3286 Apr 30 j 18:05	30°♒					
direct	-3286 May 25 j 03:27	26°♒12'38		conjunction	-3281 Aug 24 j 19:25	4°♒33'38	1°03'04
	-3286 Jun 18 j 05:57	0°♓		minimum elong	-3281 Aug 24 j 20:37	4°♒35'42	1°03'09
	-3286 Aug 16 j 16:49	0°♈			-3281 Sep 30 j 00:17	0°♑	
	-3286 Sep 30 j 02:51	0°♉		morning rise	-3281 Oct 13 j 01:43	9°♑25'06	
	-3286 Nov 11 j 12:43	0°♊			-3281 Nov 10 j 01:00	0°♒	
	-3286 Dec 24 j 06:04	0°♋			-3281 Dec 19 j 17:48	0°♓	
	-3285 Feb 06 j 04:51	0°♌		desc. node	-3281 Dec 21 j 01:45	1°♓01'06	
asc. node	-3285 Mar 09 j 15:13	20°♌52'07			-3280 Jan 27 j 18:49	0°♈	
	-3285 Mar 23 j 14:14	0°♍			-3280 Mar 07 j 00:25	0°♉	
evening set	-3285 Apr 22 j 14:55	19°♍25'06			-3280 Apr 16 j 13:19	0°♊	
	-3285 May 09 j 03:10	0°♎			-3280 May 30 j 04:35	0°♋	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 13

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3280 Jul 21 j 04:18	0°Υ				-3275 Oct 18 j 20:45	0°ℓ	
retrograde	-3280 Sep 13 j 06:40	15°Υ18'19				-3275 Nov 26 j 00:45	0°♂	
min. Earth dist.	-3280 Oct 18 j 06:29	7°Υ16'44	0.61115 AU	evening set		-3275 Dec 18 j 04:31	17°♂20'30	
opposition	-3280 Oct 23 j 01:12	5°Υ22'30	0°-16'-2			-3274 Jan 03 j 12:54	0°♂	
greatest brilliancy	-3280 Oct 22 j 23:34	5°Υ24'07	-1.6m			-3274 Feb 12 j 05:47	0°≈	
asc. node	-3280 Oct 29 j 12:59	2°Υ51'21						
	-3280 Nov 06 j 23:13	30°♂		conjunction		-3274 Feb 20 j 04:41	5°≈51'34	-1°00'-16
direct	-3280 Nov 29 j 19:49	26°♂33'10		minimum elong		-3274 Feb 20 j 06:47	5°≈55'27	1°00'22
	-3280 Dec 24 j 17:25	0°Υ				-3274 Mar 25 j 18:46	0°♂	
	-3279 Mar 04 j 23:41	0°♂		max. Earth dist.		-3274 Apr 03 j 23:21	6°♂26'12	2.49959 AU
	-3279 Apr 26 j 21:31	0°♂		morning rise		-3274 Apr 20 j 19:57	18°♂03'45	
	-3279 Jun 14 j 06:24	0°♂				-3274 May 08 j 11:55	0°Υ	
	-3279 Jul 29 j 11:45	0°♂		asc. node		-3274 Jun 21 j 11:34	28°Υ43'34	
evening set	-3279 Aug 18 j 23:05	14°♂12'51				-3274 Jun 23 j 11:34	0°♂	
max. Earth dist.	-3279 Sep 03 j 00:37	24°♂55'33	2.46734 AU			-3274 Aug 10 j 23:14	0°♂	
	-3279 Sep 10 j 01:27	0°♂				-3274 Oct 02 j 16:16	0°♂	
						-3274 Dec 19 j 04:21	0°♂	
conjunction	-3279 Oct 11 j 01:05	22°♂51'36	0°18'28	retrograde		-3274 Dec 31 j 16:04	0°♂55'01	
minimum elong	-3279 Oct 11 j 02:12	22°♂53'41	0°18'28			-3273 Jan 12 j 16:12	30°♂	
	-3279 Oct 20 j 12:25	0°♂		opposition		-3273 Feb 06 j 22:42	22°♂41'10	4°59'04
desc. node	-3279 Nov 06 j 23:36	13°♂19'46		greatest brilliancy		-3273 Feb 08 j 09:57	22°♂07'51	-1.6m
	-3279 Nov 28 j 12:47	0°♂		min. Earth dist.		-3273 Feb 13 j 11:39	20°♂13'22	0.59034 AU
morning rise	-3279 Dec 09 j 11:18	8°♂31'43		direct		-3273 Mar 19 j 13:46	12°♂57'45	
	-3278 Jan 05 j 21:44	0°♂				-3273 May 17 j 00:36	0°♂	
greatest brilliancy	-3278 Jan 30 j 14:34	19°♂16'03	1.2m	desc. node		-3273 Jun 29 j 19:03	25°♂20'32	
	-3278 Feb 13 j 11:52	0°♂				-3273 Jul 06 j 21:57	0°♂	
	-3278 Mar 25 j 04:39	0°≈				-3273 Aug 18 j 15:39	0°♂	
	-3278 May 05 j 23:19	0°♂				-3273 Sep 27 j 10:02	0°♂	
	-3278 Jun 20 j 02:58	0°Υ				-3273 Nov 05 j 04:40	0°♂	
	-3278 Aug 11 j 04:20	0°♂				-3273 Dec 14 j 06:13	0°♂	
asc. node	-3278 Sep 16 j 13:50	15°♂32'23				-3272 Jan 23 j 12:38	0°≈	
retrograde	-3278 Oct 18 j 19:10	21°♂17'23		evening set		-3272 Feb 18 j 09:54	18°≈37'42	
opposition	-3278 Nov 27 j 20:46	11°♂28'56	2°34'40			-3272 Mar 05 j 14:06	0°♂	
min. Earth dist.	-3278 Nov 26 j 19:31	11°♂54'17	0.66771 AU					
greatest brilliancy	-3278 Nov 27 j 16:09	11°♂33'34	-1.3m	conjunction		-3272 Apr 13 j 12:29	26°♂35'01	0°-14'-26
direct	-3277 Jan 07 j 00:43	1°♂49'42		minimum elong		-3272 Apr 13 j 13:11	26°♂36'11	0°14'27
	-3277 Apr 02 j 00:24	0°♂		behind sun begin		-3272 Apr 13 j 04:19	26°♂21'21	
	-3277 May 24 j 12:33	0°♂		behind sun end		-3272 Apr 13 j 22:03	26°♂51'01	
	-3277 Jul 09 j 23:34	0°♂				-3272 Apr 18 j 15:10	0°Υ	
	-3277 Aug 21 j 19:28	0°♂		max. Earth dist.		-3272 May 05 j 23:56	11°Υ29'27	2.60696 AU
desc. node	-3277 Sep 24 j 22:33	25°♂18'10		asc. node		-3272 May 08 j 10:17	13°Υ05'11	
	-3277 Oct 01 j 02:58	0°♂		morning rise		-3272 Jun 03 j 07:32	29°Υ54'10	
evening set	-3277 Oct 11 j 23:24	8°♂18'50				-3272 Jun 03 j 11:10	0°♂	
	-3277 Nov 08 j 20:34	0°♂				-3272 Jul 20 j 16:25	0°♂	
						-3272 Sep 07 j 02:59	0°♂	
conjunction	-3277 Dec 14 j 05:20	27°♂50'52	0°-50'-51			-3272 Oct 27 j 14:24	0°♂	
minimum elong	-3277 Dec 14 j 02:07	27°♂44'32	0°50'56			-3272 Dec 23 j 19:58	0°♂	
	-3277 Dec 16 j 22:55	0°♂		retrograde		-3271 Feb 21 j 04:25	16°♂03'53	
max. Earth dist.	-3276 Jan 05 j 16:32	15°♂29'43	2.37742 AU	opposition		-3271 Mar 26 j 20:31	9°♂30'50	2°55'11
	-3276 Jan 24 j 08:12	0°♂		greatest brilliancy		-3271 Mar 28 j 06:34	9°♂02'34	-2.3m
morning rise	-3276 Feb 20 j 17:16	20°♂54'19		min. Earth dist.		-3271 Apr 04 j 07:51	6°♂42'42	0.46749 AU
	-3276 Mar 03 j 20:52	0°≈		direct		-3271 May 02 j 22:07	1°♂30'22	
	-3276 Apr 14 j 06:34	0°♂		desc. node		-3271 May 16 j 18:55	2°♂48'21	
	-3276 May 28 j 03:51	0°Υ				-3271 Jul 17 j 09:29	0°♂	
	-3276 Jul 14 j 07:24	0°♂				-3271 Aug 31 j 03:47	0°♂	
asc. node	-3276 Aug 03 j 13:16	12°♂02'28				-3271 Oct 11 j 08:46	0°♂	
	-3276 Sep 05 j 07:20	0°♂				-3271 Nov 21 j 03:00	0°♂	
retrograde	-3276 Nov 21 j 22:17	24°♂54'37				-3270 Jan 01 j 18:16	0°≈	
opposition	-3276 Dec 31 j 03:49	15°♂41'01	4°24'16			-3270 Feb 13 j 22:31	0°♂	
greatest brilliancy	-3276 Dec 31 j 15:04	15°♂29'54	-1.3m	asc. node		-3270 Mar 26 j 08:03	27°♂03'34	
min. Earth dist.	-3275 Jan 02 j 22:22	14°♂35'20	0.66115 AU			-3270 Mar 30 j 19:13	0°Υ	
direct	-3275 Feb 10 j 09:12	5°♂40'36		evening set		-3270 Apr 06 j 08:10	4°Υ17'26	
	-3275 Apr 27 j 01:16	0°♂				-3270 May 16 j 00:45	0°♂	
	-3275 Jun 17 j 02:25	0°♂						
	-3275 Jul 31 j 06:35	0°♂		conjunction		-3270 May 25 j 15:09	6°♂09'24	0°32'51
desc. node	-3275 Aug 11 j 20:58	8°♂20'43		minimum elong		-3270 May 25 j 14:01	6°♂07'36	0°32'55
	-3275 Sep 10 j 00:13	0°♂		max. Earth dist.		-3270 May 31 j 05:29	9°♂44'22	2.66373 AU

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3270 Jul 01 j 23:46	0°♊		greatest brilliancy	-3265 Oct 07 j 22:52	20°♋00'46	-1.7m
morning rise	-3270 Jul 10 j 23:38	5°♊43'39		direct	-3265 Nov 13 j 22:53	11°♋28'48	
	-3270 Aug 18 j 01:12	0°♌		asc. node	-3265 Nov 16 j 04:16	11°♋30'40	
	-3270 Oct 03 j 21:24	0°♍			-3264 Jan 17 j 16:22	0°♎	
	-3270 Nov 19 j 17:02	0°♏			-3264 Mar 14 j 22:41	0°♐	
	-3269 Jan 06 j 09:24	0°♑			-3264 May 04 j 19:13	0°♒	
	-3269 Feb 26 j 22:42	0°♓			-3264 Jun 21 j 12:24	0°♔	
desc. node	-3269 Apr 03 j 20:09	16°♓22'37		evening set	-3264 Aug 01 j 08:41	27°♔07'02	
retrograde	-3269 May 07 j 20:04	23°♓00'12			-3264 Aug 05 j 14:01	0°♕	
opposition	-3269 Jun 07 j 05:49	17°♓57'19	-4°-29'-28	max. Earth dist.	-3264 Aug 17 j 08:13	8°♕06'47	2.51622 AU
greatest brilliancy	-3269 Jun 07 j 05:32	17°♓57'31	-2.9m		-3264 Sep 17 j 05:39	0°♖	
min. Earth dist.	-3269 Jun 07 j 13:29	17°♓52'13	0.37668 AU				
direct	-3269 Jul 07 j 12:27	12°♓53'34		conjunction	-3264 Sep 20 j 16:19	2°♖29'29	0°40'49
	-3269 Sep 02 j 01:22	0°♗		minimum elong	-3264 Sep 20 j 18:03	2°♖32'38	0°40'51
	-3269 Oct 23 j 06:23	0°♘			-3264 Oct 27 j 21:11	0°♙	
	-3269 Dec 08 j 15:36	0°♚		morning rise	-3264 Nov 14 j 05:20	13°♙09'24	
	-3268 Jan 23 j 15:15	0°♛		desc. node	-3264 Nov 23 j 18:32	20°♙28'29	
asc. node	-3268 Feb 11 j 05:46	12°♛01'57			-3264 Dec 06 j 02:55	0°♜	
	-3268 Mar 10 j 06:00	0°♞			-3263 Jan 13 j 16:37	0°♝	
	-3268 Apr 26 j 11:28	0°♟			-3263 Feb 21 j 10:41	0°♞	
evening set	-3268 May 15 j 16:44	12°♟10'25			-3263 Apr 02 j 07:49	0°♠	
	-3268 Jun 12 j 18:16	0°♞			-3263 May 14 j 11:36	0°♟	
max. Earth dist.	-3268 Jun 23 j 02:03	6°♞35'20	2.66611 AU		-3263 Jun 29 j 20:58	0°♞	
					-3263 Aug 27 j 22:40	0°♠	
conjunction	-3268 Jul 01 j 09:51	11°♞55'18	1°03'40	asc. node	-3263 Oct 03 j 03:50	8°♠01'53	
minimum elong	-3268 Jul 01 j 08:51	11°♞53'42	1°03'46	retrograde	-3263 Oct 05 j 08:00	8°♠03'45	
	-3268 Jul 29 j 09:48	0°♓			-3263 Nov 09 j 18:55	30°♠	
morning rise	-3268 Aug 15 j 12:29	11°♓10'57		min. Earth dist.	-3263 Nov 11 j 21:57	29°♠09'04	0.65289 AU
	-3268 Sep 12 j 21:53	0°♕		opposition	-3263 Nov 14 j 10:39	28°♠08'05	1°36'06
	-3268 Oct 27 j 02:40	0°♖		greatest brilliancy	-3263 Nov 14 j 04:47	28°♠13'58	-1.4m
	-3268 Dec 09 j 03:22	0°♗		direct	-3263 Dec 23 j 20:07	18°♠44'36	
	-3267 Jan 20 j 08:17	0°♘			-3262 Feb 10 j 11:35	0°♟	
desc. node	-3267 Feb 18 j 19:43	21°♘02'31			-3262 Apr 12 j 08:43	0°♞	
	-3267 Mar 03 j 11:08	0°♗			-3262 Jun 01 j 15:47	0°♓	
	-3267 Apr 16 j 08:47	0°♘			-3262 Jul 17 j 11:47	0°♕	
	-3267 Jun 09 j 16:07	0°♙			-3262 Aug 29 j 04:05	0°♖	
retrograde	-3267 Jul 14 j 18:21	7°♙49'30		evening set	-3262 Sep 19 j 01:23	15°♖21'08	
min. Earth dist.	-3267 Aug 11 j 12:35	2°♙36'38	0.45037 AU		-3262 Oct 08 j 12:17	0°♗	
greatest brilliancy	-3267 Aug 17 j 13:17	0°♙33'46	-2.4m	desc. node	-3262 Oct 11 j 15:59	2°♗24'10	
opposition	-3267 Aug 19 j 12:45	29°♘53'05	-5°-40'-23	max. Earth dist.	-3262 Oct 16 j 15:15	6°♗12'11	2.39409 AU
	-3267 Aug 19 j 04:39	30°♘			-3262 Nov 16 j 07:59	0°♘	
direct	-3267 Sep 20 j 19:11	23°♘25'46					
	-3267 Oct 24 j 23:56	0°♙		conjunction	-3262 Nov 17 j 02:01	0°♘35'16	0°-25'-14
	-3267 Dec 26 j 19:28	0°♚		minimum elong	-3262 Nov 17 j 00:03	0°♘31'26	0°25'17
asc. node	-3267 Dec 29 j 04:58	1°♚20'11			-3262 Dec 24 j 12:10	0°♛	
	-3266 Feb 16 j 11:49	0°♞		morning rise	-3261 Jan 23 j 00:04	23°♛04'57	
	-3266 Apr 07 j 00:30	0°♟			-3261 Jan 31 j 22:22	0°♘	
	-3266 May 25 j 07:35	0°♞			-3261 Mar 12 j 11:13	0°♙	
evening set	-3266 Jun 22 j 20:53	18°♞09'53			-3261 Apr 22 j 21:48	0°♚	
	-3266 Jul 11 j 03:25	0°♓			-3261 Jun 06 j 01:16	0°♞	
max. Earth dist.	-3266 Jul 17 j 21:56	4°♓26'02	2.61525 AU		-3261 Jul 24 j 05:36	0°♟	
				asc. node	-3261 Aug 21 j 04:35	15°♟35'44	
conjunction	-3266 Aug 08 j 16:37	18°♓52'46	1°09'32		-3261 Sep 20 j 10:41	0°♞	
minimum elong	-3266 Aug 08 j 17:08	18°♓53'37	1°09'38	retrograde	-3261 Nov 09 j 00:53	12°♞00'42	
	-3266 Aug 25 j 03:41	0°♕		opposition	-3261 Dec 18 j 17:28	2°♞30'51	3°49'12
morning rise	-3266 Sep 24 j 20:54	21°♕14'49		greatest brilliancy	-3261 Dec 18 j 20:49	2°♞27'30	-1.3m
	-3266 Oct 07 j 06:07	0°♖		min. Earth dist.	-3261 Dec 20 j 00:00	2°♞00'26	0.67135 AU
	-3266 Nov 17 j 15:46	0°♗			-3261 Dec 25 j 02:34	30°♟	
	-3266 Dec 27 j 18:54	0°♘		direct	-3260 Jan 28 j 17:07	22°♟35'15	
desc. node	-3265 Jan 06 j 19:28	7°♘35'35			-3260 Mar 06 j 18:53	0°♞	
	-3265 Feb 05 j 06:33	0°♗			-3260 May 08 j 08:14	0°♓	
	-3265 Mar 17 j 00:10	0°♘			-3260 Jun 25 j 19:37	0°♕	
	-3265 Apr 27 j 08:18	0°♙			-3260 Aug 08 j 06:44	0°♖	
	-3265 Jun 12 j 03:37	0°♚		desc. node	-3260 Aug 28 j 13:43	14°♚49'05	
retrograde	-3265 Aug 30 j 05:38	29°♚33'31			-3260 Sep 17 j 18:37	0°♗	
min. Earth dist.	-3265 Oct 02 j 07:53	22°♚12'53	0.57329 AU		-3260 Oct 26 j 12:56	0°♘	
opposition	-3265 Oct 08 j 11:13	19°♚48'41	-1°-39'-51	evening set	-3260 Nov 20 j 19:37	19°♘53'40	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 15

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3260 Dec 03 j 15:19	0°♊				-3255 Nov 30 j 01:53	0°♎	
	-3259 Jan 11 j 01:22	0°♋				-3254 Jan 22 j 04:50	0°♌	
					retrograde	-3254 Apr 05 j 20:19	23°♍47'11	
conjunction	-3259 Jan 25 j 17:26	11°♋15'05	-1°-7'-11		desc. node	-3254 Apr 20 j 11:53	22°♍28'36	
minimum elong	-3259 Jan 25 j 17:39	11°♋15'29	1°07'18		opposition	-3254 May 06 j 21:57	18°♍28'48	-1°-9'-35
	-3259 Feb 19 j 15:33	0°♌			greatest brilliancy	-3254 May 07 j 05:28	18°♍23'29	-2.7m
max. Earth dist.	-3259 Mar 15 j 19:41	17°♌41'20	2.44767 AU		min. Earth dist.	-3254 May 12 j 04:46	16°♍59'29	0.39665 AU
morning rise	-3259 Mar 30 j 18:39	28°♌22'38			direct	-3254 Jun 08 j 11:03	12°♍30'30	
	-3259 Apr 02 j 01:45	0°♍				-3254 Aug 03 j 17:11	0°♎	
	-3259 May 15 j 18:17	0°♎				-3254 Sep 21 j 19:10	0°♏	
	-3259 Jun 30 j 23:54	0°♐				-3254 Nov 04 j 20:39	0°♑	
asc. node	-3259 Jul 08 j 04:12	4°♐29'46				-3254 Dec 18 j 11:47	0°♒	
	-3259 Aug 19 j 12:37	0°♑				-3253 Jan 31 j 23:49	0°♓	
	-3259 Oct 15 j 14:54	0°♒			asc. node	-3253 Feb 27 j 21:35	17°♓44'33	
retrograde	-3259 Dec 15 j 06:21	16°♒28'26				-3253 Mar 18 j 17:39	0°♈	
opposition	-3258 Jan 22 j 11:08	7°♒47'29	4°57'05		evening set	-3253 May 01 j 13:17	28°♈08'23	
greatest brilliancy	-3258 Jan 23 j 13:06	7°♒22'23	-1.4m			-3253 May 04 j 11:17	0°♉	
min. Earth dist.	-3258 Jan 27 j 13:50	5°♒49'08	0.62554 AU		max. Earth dist.	-3253 Jun 14 j 21:33	26°♉23'13	2.67178 AU
	-3258 Feb 14 j 11:50	30°♒II						
direct	-3258 Mar 04 j 14:00	27°♒50'49			conjunction	-3253 Jun 17 j 22:24	28°♉19'21	0°54'14
	-3258 Mar 23 j 15:18	0°♓			minimum elong	-3253 Jun 17 j 21:09	28°♉17'21	0°54'20
	-3258 May 31 j 05:49	0°♈				-3253 Jun 20 j 13:31	0°♊	
desc. node	-3258 Jul 16 j 12:31	29°♈40'47			morning rise	-3253 Aug 02 j 03:49	27°♊19'13	
	-3258 Jul 16 j 23:39	0°♉				-3253 Aug 06 j 07:19	0°♋	
	-3258 Aug 27 j 14:20	0°♌				-3253 Sep 21 j 05:03	0°♍	
	-3258 Oct 05 j 20:38	0°♎				-3253 Nov 05 j 04:07	0°♏	
	-3258 Nov 13 j 07:06	0°♐				-3253 Dec 19 j 09:09	0°♑	
	-3258 Dec 22 j 01:22	0°♒				-3252 Feb 01 j 08:18	0°♓	
evening set	-3257 Jan 27 j 03:22	27°♒08'00			desc. node	-3252 Mar 07 j 13:45	23°♓36'02	
	-3257 Jan 31 j 00:45	0°♒				-3252 Mar 17 j 10:28	0°♈	
	-3257 Mar 13 j 19:42	0°♉				-3252 May 08 j 23:40	0°♉	
					retrograde	-3252 Jun 21 j 10:56	11°♉16'43	
conjunction	-3257 Mar 26 j 14:01	8°♉52'41	0°-34'-15		min. Earth dist.	-3252 Jul 17 j 23:58	6°♉45'00	0.40543 AU
minimum elong	-3257 Mar 26 j 15:44	8°♉55'39	0°34'17		greatest brilliancy	-3252 Jul 22 j 20:49	5°♉17'16	-2.6m
max. Earth dist.	-3257 Apr 25 j 16:04	29°♉19'44	2.57060 AU		opposition	-3252 Jul 24 j 17:10	4°♉43'35	-6°-35'-33
	-3257 Apr 26 j 16:08	0°♊				-3252 Aug 13 j 03:13	30°♊♊	
morning rise	-3257 May 19 j 05:26	14°♊55'19			direct	-3252 Aug 24 j 07:21	29°♊10'45	
asc. node	-3257 May 26 j 01:53	19°♊23'44				-3252 Sep 04 j 14:43	0°♋	
	-3257 Jun 11 j 11:23	0°♌				-3252 Nov 17 j 01:38	0°♍	
	-3257 Jul 29 j 00:07	0°♎				-3251 Jan 07 j 04:34	0°♏	
	-3257 Sep 16 j 12:08	0°♐			asc. node	-3251 Jan 14 j 19:25	4°♐38'00	
	-3257 Nov 09 j 07:23	0°♒				-3251 Feb 25 j 02:15	0°♑	
retrograde	-3256 Jan 30 j 10:03	26°♒55'43				-3251 Apr 14 j 11:16	0°♓	
opposition	-3256 Mar 05 j 18:31	19°♒37'05	4°13'25			-3251 Jun 01 j 06:27	0°♈	
greatest brilliancy	-3256 Mar 07 j 12:57	18°♒59'24	-1.9m		evening set	-3251 Jun 08 j 01:06	4°♈18'05	
min. Earth dist.	-3256 Mar 14 j 00:57	16°♒41'38	0.51941 AU		max. Earth dist.	-3251 Jul 07 j 23:19	23°♈29'57	2.64137 AU
direct	-3256 Apr 13 j 17:55	10°♒41'01				-3251 Jul 17 j 23:20	0°♉	
desc. node	-3256 Jun 02 j 11:20	24°♒19'52						
	-3256 Jun 13 j 14:27	0°♊			conjunction	-3251 Jul 24 j 11:36	4°♉15'34	1°10'46
	-3256 Jul 31 j 15:49	0°♌			minimum elong	-3251 Jul 24 j 11:26	4°♉15'17	1°10'53
	-3256 Sep 11 j 06:26	0°♎				-3251 Sep 01 j 02:56	0°♍	
	-3256 Oct 21 j 01:47	0°♐			morning rise	-3251 Sep 08 j 08:45	4°♍55'09	
	-3256 Nov 29 j 21:49	0°♒				-3251 Oct 14 j 13:53	0°♏	
	-3255 Jan 09 j 20:01	0°♒				-3251 Nov 25 j 11:43	0°♑	
	-3255 Feb 21 j 10:39	0°♓				-3250 Jan 05 j 05:28	0°♓	
evening set	-3255 Mar 19 j 23:25	18°♓02'55			desc. node	-3250 Jan 23 j 12:41	13°♓39'13	
	-3255 Apr 06 j 21:33	0°♈				-3250 Feb 14 j 09:19	0°♈	
asc. node	-3255 Apr 11 j 23:54	3°♈22'11				-3250 Mar 26 j 23:19	0°♉	
						-3250 May 08 j 21:47	0°♊	
						-3250 Jun 29 j 19:09	0°♋	
conjunction	-3255 May 10 j 01:56	21°♈43'17	0°15'57		retrograde	-3250 Aug 13 j 19:41	11°♋51'51	
minimum elong	-3255 May 10 j 01:18	21°♈42'14	0°15'59		min. Earth dist.	-3250 Sep 13 j 19:28	5°♋18'52	0.52774 AU
max. Earth dist.	-3255 May 21 j 21:34	29°♈21'18	2.64800 AU		greatest brilliancy	-3250 Sep 20 j 00:08	2°♋58'07	-2.0m
	-3255 May 22 j 21:37	0°♉			opposition	-3250 Sep 21 j 03:16	2°♋32'24	-3°-12'-59
morning rise	-3255 Jun 26 j 17:50	22°♉17'07				-3250 Sep 28 j 02:31	30°♋♋	
	-3255 Jul 08 j 21:11	0°♊				-3250 Oct 26 j 02:03	24°♋49'59	
	-3255 Aug 25 j 07:47	0°♋			direct	-3250 Nov 25 j 14:23	0°♌	
	-3255 Oct 12 j 03:13	0°♍						

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 16

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

asc. node	-3250 Dec 02 j 18:57	2° Υ 22'40				-3244 Jan 19 j 13:54	0° Θ	
	-3249 Jan 30 j 21:53	0° Υ		max. Earth dist.		-3244 Feb 12 j 14:44	18° Θ 23'18	2.39699 AU
	-3249 Mar 24 j 17:36	0° Υ				-3244 Feb 28 j 02:14	0° \approx	
	-3249 May 13 j 07:08	0° Π		morning rise		-3244 Mar 06 j 16:47	5° \approx 38'00	
	-3249 Jun 29 j 13:46	0° Θ				-3244 Apr 09 j 10:46	0° Υ	
evening set	-3249 Jul 17 j 01:27	11° Θ 28'43				-3244 May 23 j 04:34	0° Υ	
max. Earth dist.	-3249 Aug 04 j 20:14	24° Θ 03'39	2.55993 AU			-3244 Jul 08 j 20:53	0° Υ	
	-3249 Aug 13 j 13:42	0° Ω		asc. node		-3244 Jul 24 j 19:22	9° Υ 42'43	
						-3244 Aug 29 j 03:34	0° Π	
conjunction	-3249 Sep 03 j 11:52	14° Ω 29'09	0°56'44			-3244 Nov 07 j 11:16	0° Θ	
minimum elong	-3249 Sep 03 j 13:23	14° Ω 31'50	0°56'47	retrograde		-3244 Nov 30 j 03:46	2° Θ 52'56	
	-3249 Sep 25 j 08:39	0° Π				-3244 Dec 21 j 07:35	30° Υ 11	
morning rise	-3249 Oct 24 j 07:38	21° Π 07'11		opposition		-3243 Jan 08 j 02:03	23° Π 49'50	4°39'45
	-3249 Nov 05 j 06:03	0° Ω		greatest brilliancy		-3243 Jan 08 j 18:24	23° Π 33'48	-1.3m
desc. node	-3249 Dec 11 j 11:02	27° Ω 27'04		min. Earth dist.		-3243 Jan 11 j 17:02	22° Π 24'35	0.65114 AU
	-3249 Dec 14 j 18:46	0° Π		direct		-3243 Feb 18 j 08:44	13° Π 48'51	
	-3248 Jan 22 j 15:15	0° Υ				-3243 Apr 18 j 01:37	0° Θ	
	-3248 Mar 01 j 15:45	0° Θ				-3243 Jun 11 j 00:37	0° Ω	
	-3248 Apr 10 j 21:06	0° \approx				-3243 Jul 25 j 22:03	0° Π	
	-3248 May 23 j 18:18	0° Υ		desc. node		-3243 Aug 02 j 05:10	5° Π 11'06	
	-3248 Jul 11 j 16:10	0° Υ				-3243 Sep 04 j 21:59	0° Ω	
retrograde	-3248 Sep 21 j 12:01	24° Υ 07'50				-3243 Oct 13 j 21:34	0° Π	
asc. node	-3248 Oct 19 j 19:29	18° Υ 41'43				-3243 Nov 21 j 03:24	0° Υ	
min. Earth dist.	-3248 Oct 27 j 11:01	15° Υ 46'03	0.62845 AU			-3243 Dec 29 j 17:02	0° Θ	
opposition	-3248 Oct 31 j 10:41	14° Υ 10'21	0°27'56	evening set		-3242 Jan 02 j 06:35	2° Θ 44'06	
greatest brilliancy	-3248 Oct 31 j 07:59	14° Υ 13'03	-1.5m			-3242 Feb 07 j 11:29	0° \approx	
direct	-3248 Dec 08 j 20:33	5° Υ 07'23						
	-3247 Feb 25 j 12:01	0° Υ		conjunction		-3242 Mar 05 j 09:24	18° \approx 51'55	0°-52'-12
	-3247 Apr 21 j 08:53	0° Π		minimum elong		-3242 Mar 05 j 11:44	18° \approx 56'06	0°52'17
	-3247 Jun 09 j 08:20	0° Θ				-3242 Mar 21 j 01:34	0° Υ	
	-3247 Jul 24 j 18:59	0° Ω		max. Earth dist.		-3242 Apr 12 j 12:55	15° Υ 36'30	2.52677 AU
evening set	-3247 Aug 29 j 15:32	25° Ω 06'49		morning rise		-3242 May 01 j 16:01	28° Υ 35'02	
	-3247 Sep 05 j 10:08	0° Π				-3242 May 03 j 18:44	0° Υ	
max. Earth dist.	-3247 Sep 14 j 19:57	6° Π 51'24	2.43998 AU	asc. node		-3242 Jun 11 j 18:14	25° Υ 35'18	
	-3247 Oct 15 j 20:22	0° Ω				-3242 Jun 18 j 15:13	0° Υ	
						-3242 Aug 05 j 16:00	0° Π	
conjunction	-3247 Oct 23 j 14:54	5° Ω 54'52	0°03'23			-3242 Sep 25 j 20:23	0° Θ	
minimum elong	-3247 Oct 23 j 15:08	5° Ω 55'19	0°03'22			-3242 Nov 26 j 04:27	0° Ω	
behind sun begin	-3247 Oct 22 j 14:47	5° Ω 08'53		retrograde		-3241 Jan 10 j 17:44	10° Ω 07'01	
behind sun end	-3247 Oct 24 j 15:28	6° Ω 41'48		opposition		-3241 Feb 16 j 10:18	2° Ω 10'42	4°50'26
desc. node	-3247 Oct 28 j 09:37	9° Ω 34'22		greatest brilliancy		-3241 Feb 18 j 01:46	1° Ω 34'04	-1.7m
	-3247 Nov 23 j 19:06	0° Π				-3241 Feb 22 j 07:12	30° Υ 06	
morning rise	-3247 Dec 24 j 23:33	24° Π 25'40		min. Earth dist.		-3241 Feb 23 j 16:56	29° Θ 29'10	0.56725 AU
	-3246 Jan 01 j 01:57	0° Υ		direct		-3241 Mar 28 j 15:18	22° Θ 39'21	
	-3246 Feb 08 j 13:53	0° Θ				-3241 May 03 j 11:50	0° Ω	
	-3246 Mar 20 j 04:11	0° \approx		desc. node		-3241 Jun 20 j 05:16	24° Ω 06'35	
	-3246 Apr 30 j 18:05	0° Υ				-3241 Jun 29 j 17:23	0° Π	
	-3246 Jun 14 j 09:21	0° Υ				-3241 Aug 12 j 15:09	0° Ω	
	-3246 Aug 03 j 10:37	0° Υ				-3241 Sep 21 j 20:50	0° Π	
asc. node	-3246 Sep 06 j 19:52	16° Υ 54'58				-3241 Oct 30 j 21:52	0° Υ	
retrograde	-3246 Oct 26 j 12:27	29° Υ 10'14				-3241 Dec 09 j 04:03	0° Θ	
opposition	-3246 Dec 05 j 12:04	19° Υ 27'33	3°04'42			-3240 Jan 18 j 14:32	0° \approx	
greatest brilliancy	-3246 Dec 05 j 09:34	19° Υ 30'03	-1.3m			-3240 Feb 29 j 19:19	0° Υ	
min. Earth dist.	-3246 Dec 05 j 06:48	19° Υ 32'49	0.67170 AU	evening set		-3240 Mar 01 j 02:14	0° Υ 12'01	
direct	-3245 Jan 15 j 00:32	9° Υ 41'18				-3240 Apr 13 j 22:48	0° Υ	
	-3245 Mar 25 j 01:31	0° Π						
	-3245 May 18 j 20:15	0° Θ		conjunction		-3240 Apr 23 j 13:58	6° Υ 23'12	0°-2'-57
	-3245 Jul 04 j 22:01	0° Ω		minimum elong		-3240 Apr 23 j 14:06	6° Υ 23'25	0°02'58
	-3245 Aug 16 j 23:20	0° Π		behind sun begin		-3240 Apr 22 j 17:07	5° Υ 48'47	
desc. node	-3245 Sep 15 j 07:18	21° Π 38'02		behind sun end		-3240 Apr 24 j 11:04	6° Υ 58'01	
	-3245 Sep 26 j 08:38	0° Ω		asc. node		-3240 Apr 28 j 15:23	9° Υ 43'19	
evening set	-3245 Oct 26 j 02:29	22° Ω 57'10		max. Earth dist.		-3240 May 12 j 02:26	18° Υ 31'55	2.62401 AU
	-3245 Nov 04 j 02:43	0° Π				-3240 May 29 j 19:13	0° Υ	
	-3245 Dec 12 j 04:56	0° Υ		morning rise		-3240 Jun 12 j 01:39	8° Υ 31'05	
						-3240 Jul 15 j 21:24	0° Π	
conjunction	-3245 Dec 30 j 01:25	14° Υ 01'37	-1°00'-50			-3240 Sep 01 j 21:16	0° Θ	
minimum elong	-3245 Dec 29 j 22:53	13° Υ 56'40	1°00'57			-3240 Oct 21 j 03:32	0° Ω	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 17

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3240 Dec 13 j 00:06	0°♎		evening set	-3234 Jul 01 j 13:09	26°♐46'13	
retrograde	-3239 Mar 07 j 16:16	28°♎45'12			-3234 Jul 06 j 12:23	0°♊	
opposition	-3239 Apr 09 j 09:13	22°♎39'24	1°44'51	max. Earth dist.	-3234 Jul 24 j 04:37	11°♊37'12	2.59753 AU
greatest brilliancy	-3239 Apr 10 j 06:11	22°♎22'48	-2.4m				
min. Earth dist.	-3239 Apr 17 j 07:21	20°♎09'35	0.43960 AU	conjunction	-3234 Aug 17 j 18:48	28°♊07'46	1°06'28
desc. node	-3239 May 07 j 05:28	15°♎44'28		minimum elong	-3234 Aug 17 j 19:43	28°♊09'20	1°06'34
direct	-3239 May 15 j 00:11	15°♎18'54			-3234 Aug 20 j 12:43	0°♋	
	-3239 Jul 04 j 15:23	0°♌			-3234 Oct 02 j 12:51	0°♎	
	-3239 Aug 23 j 01:48	0°♍		morning rise	-3234 Oct 04 j 23:54	1°♎45'26	
	-3239 Oct 04 j 17:31	0°♎			-3234 Nov 12 j 18:12	0°♏	
	-3239 Nov 15 j 06:02	0°♏			-3234 Dec 22 j 16:00	0°♐	
	-3239 Dec 27 j 09:27	0°♑		desc. node	-3234 Dec 28 j 04:44	4°♍12'38	
	-3238 Feb 08 j 22:01	0°♒			-3233 Jan 30 j 21:34	0°♎	
asc. node	-3238 Mar 16 j 13:01	23°♒46'40			-3233 Mar 11 j 07:21	0°♏	
	-3238 Mar 26 j 00:28	0°♑			-3233 Apr 21 j 02:14	0°♑	
evening set	-3238 Apr 15 j 18:52	13°♑31'02			-3233 Jun 04 j 08:23	0°♒	
	-3238 May 11 j 09:12	0°♒			-3233 Jul 29 j 23:30	0°♑	
				retrograde	-3233 Sep 07 j 23:52	9°♑10'36	
conjunction	-3238 Jun 03 j 06:22	14°♒37'51	0°41'35	min. Earth dist.	-3233 Oct 12 j 03:47	1°♑26'39	0.59514 AU
minimum elong	-3238 Jun 03 j 05:07	14°♒35'50	0°41'39		-3233 Oct 15 j 19:29	30°♒♐	
max. Earth dist.	-3238 Jun 05 j 15:53	16°♒09'36	2.66897 AU	opposition	-3233 Oct 17 j 13:24	29°♒18'27	0°-50'-9
	-3238 Jun 27 j 08:51	0°♐		greatest brilliancy	-3233 Oct 17 j 07:50	29°♒23'57	-1.6m
morning rise	-3238 Jul 19 j 01:57	13°♐51'22		asc. node	-3233 Nov 06 j 10:21	22°♒41'12	
	-3238 Aug 13 j 06:55	0°♊		direct	-3233 Nov 23 j 19:09	20°♒41'20	
	-3238 Sep 28 j 17:47	0°♋			-3232 Jan 05 j 22:41	0°♑	
	-3238 Nov 13 j 18:17	0°♎			-3232 Mar 08 j 14:44	0°♒	
	-3238 Dec 29 j 19:41	0°♏			-3232 Apr 29 j 14:24	0°♐	
	-3237 Feb 15 j 05:44	0°♐			-3232 Jun 16 j 17:19	0°♊	
desc. node	-3237 Mar 25 j 05:43	21°♍46'13			-3232 Jul 31 j 22:07	0°♋	
	-3237 Apr 11 j 07:34	0°♎		evening set	-3232 Aug 11 j 05:14	7°♋05'21	
retrograde	-3237 May 25 j 07:28	10°♎57'42		max. Earth dist.	-3232 Aug 26 j 07:24	17°♋39'23	2.48954 AU
min. Earth dist.	-3237 Jun 22 j 14:39	6°♎22'15	0.37906 AU		-3232 Sep 12 j 13:52	0°♎	
opposition	-3237 Jun 25 j 09:26	5°♎36'57	-5°-52'-12				
greatest brilliancy	-3237 Jun 24 j 15:11	5°♎49'20	-2.8m	conjunction	-3232 Oct 01 j 22:56	14°♎09'46	0°28'46
direct	-3237 Jul 25 j 03:25	0°♎37'24		minimum elong	-3232 Oct 02 j 00:26	14°♎12'33	0°28'46
	-3237 Oct 13 j 07:19	0°♏			-3232 Oct 23 j 03:39	0°♏	
	-3237 Dec 01 j 16:21	0°♑		desc. node	-3232 Nov 14 j 02:42	16°♏43'58	
	-3236 Jan 17 j 21:37	0°♒		morning rise	-3232 Nov 28 j 01:57	27°♏30'47	
asc. node	-3236 Feb 01 j 11:45	9°♒17'16			-3232 Dec 01 j 06:57	0°♍	
	-3236 Mar 05 j 03:26	0°♑			-3231 Jan 08 j 18:05	0°♎	
	-3236 Apr 21 j 16:48	0°♒			-3231 Feb 16 j 09:25	0°♏	
evening set	-3236 May 24 j 06:11	20°♒33'15			-3231 Mar 28 j 03:04	0°♑	
	-3236 Jun 08 j 03:24	0°♐			-3231 May 08 j 23:35	0°♒	
max. Earth dist.	-3236 Jun 28 j 13:17	13°♐02'15	2.65960 AU		-3231 Jun 23 j 11:28	0°♑	
					-3231 Aug 16 j 08:49	0°♒	
conjunction	-3236 Jul 09 j 18:08	20°♐14'49	1°07'27	asc. node	-3231 Sep 23 j 11:04	13°♒49'42	
minimum elong	-3236 Jul 09 j 17:23	20°♐13'36	1°07'34	retrograde	-3231 Oct 13 j 02:20	16°♒08'39	
	-3236 Jul 24 j 19:18	0°♊		min. Earth dist.	-3231 Nov 20 j 12:07	6°♒57'37	0.66230 AU
morning rise	-3236 Aug 23 j 23:42	19°♊50'53		opposition	-3231 Nov 22 j 05:02	6°♒16'32	2°11'17
	-3236 Sep 08 j 04:18	0°♋		greatest brilliancy	-3231 Nov 21 j 23:22	6°♒22'14	-1.3m
	-3236 Oct 22 j 02:23	0°♎			-3231 Dec 09 j 13:37	30°♒♑	
	-3236 Dec 03 j 16:14	0°♏		direct	-3230 Jan 01 j 01:23	26°♑43'41	
	-3235 Jan 14 j 06:09	0°♐			-3230 Jan 25 j 11:09	0°♒	
desc. node	-3235 Feb 09 j 05:53	18°♍56'03			-3230 Apr 05 j 20:37	0°♐	
	-3235 Feb 24 j 11:04	0°♎			-3230 May 27 j 09:27	0°♊	
	-3235 Apr 07 j 15:11	0°♏			-3230 Jul 12 j 15:04	0°♋	
	-3235 May 24 j 14:45	0°♑			-3230 Aug 24 j 10:42	0°♎	
retrograde	-3235 Jul 26 j 09:25	21°♑25'18		evening set	-3230 Oct 01 j 16:16	28°♎23'01	
min. Earth dist.	-3235 Aug 24 j 06:00	15°♑44'13	0.47804 AU	desc. node	-3230 Oct 02 j 01:24	28°♎40'22	
greatest brilliancy	-3235 Aug 30 j 12:40	13°♑29'44	-2.2m		-3230 Oct 03 j 19:17	0°♏	
opposition	-3235 Sep 01 j 06:47	12°♑51'57	-4°-49'-54		-3230 Nov 11 j 14:13	0°♐	
direct	-3235 Oct 04 j 12:00	5°♑55'40		max. Earth dist.	-3230 Nov 19 j 16:47	6°♍21'33	2.37692 AU
	-3235 Dec 17 j 23:14	0°♒					
asc. node	-3235 Dec 19 j 10:53	0°♒45'19		conjunction	-3230 Dec 02 j 03:24	16°♍09'05	0°-40'-40
	-3234 Feb 10 j 09:35	0°♑		minimum elong	-3230 Dec 02 j 00:26	16°♍03'14	0°40'44
	-3234 Apr 01 j 20:20	0°♒			-3230 Dec 19 j 17:18	0°♎	
	-3234 May 20 j 12:54	0°♐			-3229 Jan 27 j 02:20	0°♏	

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

morning rise	-3229 Feb 08 j 11:12	9°♂30'59		desc. node	-3224 May 23 j 21:26	27°♂55'02	
	-3229 Mar 07 j 14:06	0°♂			-3224 May 29 j 14:00	0°♂	
	-3229 Apr 17 j 22:47	0°♂			-3224 Jul 23 j 15:20	0°♂	
	-3229 May 31 j 20:41	0°♂			-3224 Sep 04 j 16:50	0°♂	
	-3229 Jul 18 j 07:10	0°♂			-3224 Oct 15 j 04:33	0°♂	
asc. node	-3229 Aug 11 j 10:50	14°♂03'47			-3224 Nov 24 j 11:00	0°♂	
	-3229 Sep 10 j 19:00	0°♂			-3223 Jan 04 j 16:59	0°♂	
retrograde	-3229 Nov 16 j 22:32	19°♂49'32			-3223 Feb 16 j 13:37	0°♂	
opposition	-3229 Dec 26 j 09:54	10°♂28'19	4°10'35	evening set	-3223 Mar 30 j 01:20	27°♂55'39	
greatest brilliancy	-3229 Dec 26 j 17:27	10°♂20'50	-1.3m	asc. node	-3223 Apr 02 j 05:41	0°♂01'46	
min. Earth dist.	-3229 Dec 28 j 12:38	9°♂38'03	0.66704 AU		-3223 Apr 02 j 04:37	0°♂	
direct	-3228 Feb 05 j 13:48	0°♂29'24			-3223 May 18 j 06:42	0°♂	
	-3228 May 01 j 10:13	0°♂					
	-3228 Jun 20 j 07:30	0°♂		conjunction	-3223 May 19 j 02:12	0°♂31'22	0°26'03
	-3228 Aug 03 j 05:27	0°♂		minimum elong	-3223 May 19 j 01:15	0°♂29'50	0°26'05
desc. node	-3228 Aug 18 j 23:44	11°♂24'42		max. Earth dist.	-3223 May 27 j 10:32	5°♂52'58	2.65768 AU
	-3228 Sep 12 j 21:22	0°♂		morning rise	-3223 Jul 04 j 23:21	0°♂28'28	
	-3228 Oct 21 j 17:22	0°♂			-3223 Jul 04 j 05:27	0°♂	
greatest brilliancy	-3228 Nov 26 j 09:34	28°♂04'02	1.2m		-3223 Aug 20 j 10:24	0°♂	
	-3228 Nov 28 j 20:30	0°♂			-3223 Oct 06 j 15:56	0°♂	
evening set	-3228 Dec 06 j 06:39	5°♂50'12			-3223 Nov 23 j 06:56	0°♂	
	-3227 Jan 06 j 06:53	0°♂			-3222 Jan 11 j 17:45	0°♂	
					-3222 Mar 10 j 21:46	0°♂	
conjunction	-3227 Feb 09 j 11:15	25°♂57'49	-1°-4'-33	desc. node	-3222 Apr 10 j 22:21	9°♂10'18	
minimum elong	-3227 Feb 09 j 12:47	26°♂00'41	1°04'40	retrograde	-3222 Apr 23 j 18:31	10°♂10'33	
	-3227 Feb 14 j 21:25	0°♂		opposition	-3222 May 24 j 04:07	5°♂07'24	-3°-5'-30
max. Earth dist.	-3227 Mar 27 j 12:17	29°♂25'40	2.47664 AU	greatest brilliancy	-3222 May 24 j 12:42	5°♂01'37	-2.8m
	-3227 Mar 28 j 07:43	0°♂		min. Earth dist.	-3222 May 26 j 22:57	4°♂22'22	0.38203 AU
morning rise	-3227 Apr 12 j 02:18	10°♂20'13			-3222 Jun 18 j 06:17	30°♂	
	-3227 May 10 j 22:57	0°♂		direct	-3222 Jun 24 j 06:59	29°♂45'38	
	-3227 Jun 25 j 23:22	0°♂			-3222 Jun 30 j 06:57	0°♂	
asc. node	-3227 Jun 28 j 08:50	1°♂31'03			-3222 Sep 11 j 13:30	0°♂	
	-3227 Aug 13 j 18:57	0°♂			-3222 Oct 28 j 12:29	0°♂	
	-3227 Oct 06 j 20:35	0°♂			-3222 Dec 12 j 10:05	0°♂	
retrograde	-3227 Dec 24 j 10:17	25°♂02'16			-3221 Jan 26 j 15:16	0°♂	
opposition	-3226 Jan 31 j 03:55	16°♂35'40	4°59'59	asc. node	-3221 Feb 18 j 03:02	14°♂41'47	
greatest brilliancy	-3226 Feb 01 j 11:14	16°♂05'46	-1.5m		-3221 Mar 13 j 19:10	0°♂	
min. Earth dist.	-3226 Feb 06 j 02:23	14°♂19'59	0.60728 AU		-3221 Apr 29 j 18:34	0°♂	
direct	-3226 Mar 13 j 01:58	6°♂44'57		evening set	-3221 May 10 j 07:23	6°♂41'29	
	-3226 May 23 j 01:25	0°♂			-3221 Jun 15 j 23:14	0°♂	
desc. node	-3226 Jul 06 j 21:53	27°♂21'10		max. Earth dist.	-3221 Jun 20 j 05:51	2°♂43'40	2.66965 AU
	-3226 Jul 10 j 20:41	0°♂					
	-3226 Aug 22 j 02:16	0°♂		conjunction	-3221 Jun 26 j 06:20	6°♂34'26	1°00'08
	-3226 Sep 30 j 15:21	0°♂		minimum elong	-3221 Jun 26 j 05:11	6°♂32'37	1°00'14
	-3226 Nov 08 j 06:03	0°♂			-3221 Aug 01 j 15:53	0°♂	
	-3226 Dec 17 j 03:25	0°♂		morning rise	-3221 Aug 10 j 08:47	5°♂39'26	
	-3225 Jan 26 j 05:29	0°♂			-3221 Sep 16 j 08:31	0°♂	
evening set	-3225 Feb 09 j 01:25	10°♂03'51			-3221 Oct 30 j 21:23	0°♂	
	-3225 Mar 09 j 02:37	0°♂			-3221 Dec 13 j 09:50	0°♂	
					-3220 Jan 25 j 07:05	0°♂	
conjunction	-3225 Apr 06 j 14:37	19°♂37'52	0°-22'-53	desc. node	-3220 Feb 26 j 22:03	22°♂46'11	
minimum elong	-3225 Apr 06 j 15:45	19°♂39'49	0°22'54		-3220 Mar 08 j 10:04	0°♂	
	-3225 Apr 22 j 00:09	0°♂			-3220 Apr 23 j 11:56	0°♂	
max. Earth dist.	-3225 May 02 j 10:01	6°♂55'31	2.59159 AU	retrograde	-3220 Jul 05 j 02:46	27°♂12'35	
asc. node	-3225 May 16 j 07:33	16°♂04'26		min. Earth dist.	-3220 Aug 01 j 04:21	22°♂20'41	0.42893 AU
morning rise	-3225 May 28 j 14:14	24°♂04'10		greatest brilliancy	-3220 Aug 06 j 19:44	20°♂31'16	-2.5m
	-3225 Jun 06 j 18:31	0°♂		opposition	-3220 Aug 08 j 20:16	19°♂51'36	-6°-12'-10
	-3225 Jul 24 j 01:52	0°♂		direct	-3220 Sep 09 j 07:50	13°♂49'04	
	-3225 Sep 10 j 21:24	0°♂			-3220 Nov 05 j 12:22	0°♂	
	-3225 Nov 01 j 11:52	0°♂			-3220 Dec 31 j 06:07	0°♂	
	-3224 Jan 03 j 13:01	0°♂		asc. node	-3219 Jan 05 j 01:55	2°♂48'55	
retrograde	-3224 Feb 11 j 21:05	7°♂51'34			-3219 Feb 19 j 12:47	0°♂	
opposition	-3224 Mar 17 j 07:36	0°♂57'11	3°34'29		-3219 Apr 09 j 12:14	0°♂	
greatest brilliancy	-3224 Mar 18 j 23:08	0°♂23'13	-2.1m		-3219 May 27 j 14:13	0°♂	
	-3224 Mar 20 j 02:02	30°♂		evening set	-3219 Jun 16 j 12:22	12°♂39'15	
min. Earth dist.	-3224 Mar 25 j 19:42	28°♂02'31	0.49092 AU		-3219 Jul 13 j 09:20	0°♂	
direct	-3224 Apr 24 j 08:06	22°♂28'48		max. Earth dist.	-3219 Jul 13 j 17:21	0°♂13'04	2.62790 AU

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 19

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

conjunction	-3219 Aug 02 j 02:27	12°55'47	1°10'38			-3214 Jul 27 j 14:55	0°8	
minimum elong	-3219 Aug 02 j 02:40	12°58'08	1°10'45	asc. node		-3214 Aug 28 j 01:31	16°851'24	
	-3219 Aug 27 j 11:56	0°9				-3214 Sep 27 j 22:08	0°II	
morning rise	-3219 Sep 17 j 14:50	14°928'55		retrograde		-3214 Nov 03 j 06:15	7°II00'11	
	-3219 Oct 09 j 18:53	0°7				-3214 Dec 06 j 12:19	30°R8	
	-3219 Nov 20 j 10:21	0°9		opposition		-3214 Dec 13 j 02:44	27°824'13	3°31'41
	-3219 Dec 30 j 19:52	0°7		greatest brilliancy		-3214 Dec 13 j 03:14	27°823'43	-1.2m
desc. node	-3218 Jan 13 j 21:41	10°735'38		min. Earth dist.		-3214 Dec 13 j 17:39	27°809'20	0.67280 AU
	-3218 Feb 08 j 14:06	0°8		direct		-3213 Jan 22 j 22:13	17°832'06	
	-3218 Mar 20 j 14:44	0°9				-3213 Mar 15 j 07:18	0°II	
	-3218 May 01 j 10:48	0°8				-3213 May 12 j 19:56	0°9	
	-3218 Jun 17 j 19:50	0°7				-3213 Jun 29 j 17:30	0°9	
retrograde	-3218 Aug 23 j 10:04	22°740'17				-3213 Aug 12 j 01:37	0°7	
min. Earth dist.	-3218 Sep 24 j 14:08	15°740'13	0.55385 AU	desc. node		-3213 Sep 05 j 16:30	18°702'56	
opposition	-3218 Oct 01 j 07:04	13°704'44	-2°-18'-22			-3213 Sep 21 j 13:14	0°9	
greatest brilliancy	-3218 Sep 30 j 12:47	13°722'25	-1.8m			-3213 Oct 30 j 07:50	0°7	
direct	-3218 Nov 06 j 03:28	5°700'21		evening set		-3213 Nov 09 j 22:47	8°720'38	
asc. node	-3218 Nov 23 j 01:31	6°742'53				-3213 Dec 07 j 10:08	0°8	
	-3217 Jan 22 j 22:59	0°7						
	-3217 Mar 19 j 00:37	0°8		conjunction		-3212 Jan 14 j 20:04	0°901'49	-1°-6'-14
	-3217 May 08 j 07:36	0°II		minimum elong		-3212 Jan 14 j 19:02	29°859'50	1°06'22
	-3217 Jun 24 j 21:02	0°9				-3212 Jan 14 j 19:08	0°9	
evening set	-3217 Jul 26 j 05:33	20°941'25				-3212 Feb 23 j 07:26	0°8	
	-3217 Aug 08 j 23:06	0°9		max. Earth dist.		-3212 Mar 04 j 13:38	7°835'04	2.42412 AU
max. Earth dist.	-3217 Aug 12 j 06:02	2°915'11	2.53658 AU	morning rise		-3212 Mar 20 j 17:28	19°820'53	
						-3212 Apr 04 j 15:38	0°7	
conjunction	-3217 Sep 13 j 14:26	24°953'49	0°48'23			-3212 May 18 j 06:54	0°7	
minimum elong	-3217 Sep 13 j 16:09	24°956'53	0°48'26			-3212 Jul 03 j 14:55	0°8	
	-3217 Sep 20 j 17:23	0°7		asc. node		-3212 Jul 15 j 01:31	7°806'17	
	-3217 Oct 31 j 12:22	0°9				-3212 Aug 22 j 16:40	0°II	
morning rise	-3217 Nov 05 j 07:58	3°937'20				-3212 Oct 21 j 21:18	0°9	
desc. node	-3217 Dec 01 j 21:13	23°949'57		retrograde		-3212 Dec 08 j 16:02	11°901'49	
	-3217 Dec 09 j 21:34	0°7		opposition		-3211 Jan 16 j 05:35	2°910'24	4°51'04
	-3216 Jan 17 j 14:12	0°8		greatest brilliancy		-3211 Jan 17 j 03:16	1°949'19	-1.4m
	-3216 Feb 25 j 10:19	0°9		min. Earth dist.		-3211 Jan 20 j 16:50	0°926'12	0.63830 AU
	-3216 Apr 05 j 09:25	0°8				-3211 Jan 21 j 20:04	30°RII	
	-3216 May 17 j 17:45	0°7		direct		-3211 Feb 26 j 11:27	22°II10'45	
	-3216 Jul 03 j 20:07	0°7				-3211 Apr 05 j 20:45	0°9	
	-3216 Sep 08 j 13:47	0°8				-3211 Jun 04 j 11:05	0°9	
retrograde	-3216 Sep 29 j 12:45	2°840'40				-3211 Jul 20 j 09:02	0°7	
asc. node	-3216 Oct 10 j 00:57	1°855'27		desc. node		-3211 Jul 23 j 15:15	2°716'33	
	-3216 Oct 19 j 06:50	30°R7				-3211 Aug 30 j 17:51	0°9	
min. Earth dist.	-3216 Nov 05 j 10:10	23°759'47	0.64322 AU			-3211 Oct 08 j 21:19	0°7	
opposition	-3216 Nov 08 j 14:12	22°743'30	1°08'52			-3211 Nov 16 j 05:29	0°8	
greatest brilliancy	-3216 Nov 08 j 09:00	22°748'43	-1.4m			-3211 Dec 24 j 20:51	0°9	
direct	-3216 Dec 17 j 13:47	13°728'22		evening set		-3210 Jan 16 j 15:11	17°917'20	
	-3215 Feb 16 j 16:00	0°8				-3210 Feb 02 j 16:49	0°8	
	-3215 Apr 15 j 13:19	0°II				-3210 Mar 16 j 08:19	0°7	
	-3215 Jun 04 j 07:17	0°9						
	-3215 Jul 20 j 00:32	0°9		conjunction		-3210 Mar 17 j 17:31	0°758'20	0°-42'-17
	-3215 Aug 31 j 17:41	0°7		minimum elong		-3210 Mar 17 j 19:36	1°701'59	0°42'21
evening set	-3215 Sep 09 j 22:17	6°741'37		max. Earth dist.		-3210 Apr 20 j 07:52	24°706'42	2.55188 AU
max. Earth dist.	-3215 Sep 30 j 08:22	21°750'27	2.41346 AU			-3210 Apr 29 j 01:50	0°7	
	-3215 Oct 11 j 03:46	0°9		morning rise		-3210 May 11 j 21:48	8°732'26	
desc. node	-3215 Oct 18 j 19:02	5°949'05		asc. node		-3210 Jun 01 j 23:23	22°720'19	
						-3210 Jun 13 j 20:21	0°8	
conjunction	-3215 Nov 06 j 01:26	19°953'05	0°-12'-49			-3210 Jul 31 j 12:39	0°II	
minimum elong	-3215 Nov 06 j 00:27	19°951'12	0°12'51			-3210 Sep 19 j 14:23	0°9	
behind sun begin	-3215 Nov 05 j 08:15	19°919'47				-3210 Nov 14 j 14:22	0°9	
behind sun end	-3215 Nov 06 j 16:40	20°922'37		retrograde		-3209 Jan 21 j 14:36	19°952'46	
	-3215 Nov 19 j 01:19	0°7		opposition		-3209 Feb 26 j 14:01	12°916'24	4°32'45
	-3215 Dec 27 j 06:46	0°8		greatest brilliancy		-3209 Feb 28 j 08:01	11°938'17	-1.8m
morning rise	-3214 Jan 10 j 04:17	10°854'10		min. Earth dist.		-3209 Mar 06 j 11:13	9°925'12	0.54161 AU
	-3214 Feb 03 j 17:11	0°9		direct		-3209 Apr 07 j 04:41	3°902'07	
	-3214 Mar 15 j 05:29	0°8		desc. node		-3209 Jun 10 j 14:23	23°957'00	
	-3214 Apr 25 j 15:51	0°7				-3209 Jun 21 j 06:11	0°7	
	-3214 Jun 08 j 21:34	0°7				-3209 Aug 06 j 03:06	0°9	

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3209 Sep 16 j 01:29	0°♌		morning rise	-3204 Sep 01 j 15:47	28°♏45'13	
	-3209 Oct 25 j 11:47	0°♍			-3204 Sep 03 j 12:10	0°♏	
	-3209 Dec 04 j 00:28	0°♎			-3204 Oct 17 j 04:37	0°♐	
	-3208 Jan 13 j 15:55	0°♏			-3204 Nov 28 j 09:58	0°♑	
	-3208 Feb 25 j 00:44	0°♐			-3203 Jan 08 j 12:19	0°♌	
evening set	-3208 Mar 12 j 01:26	11°♐00'44		desc. node	-3203 Jan 30 j 15:41	16°♌21'42	
	-3208 Apr 09 j 06:53	0°♑			-3203 Feb 18 j 02:02	0°♍	
asc. node	-3208 Apr 18 j 21:28	6°♑21'31			-3203 Mar 31 j 04:52	0°♎	
					-3203 May 14 j 06:59	0°♏	
conjunction	-3208 May 03 j 03:37	15°♑42'47	0°08'13		-3203 Jul 13 j 03:19	0°♐	
minimum elong	-3208 May 03 j 03:15	15°♑42'12	0°08'14	retrograde	-3203 Aug 06 j 04:09	3°♐50'18	
behind sun begin	-3208 May 02 j 09:18	15°♑12'53			-3203 Aug 29 j 08:53	30°♑	
behind sun end	-3208 May 03 j 21:13	16°♑11'30		min. Earth dist.	-3203 Sep 05 j 04:12	27°♑40'49	0.50567 AU
max. Earth dist.	-3208 May 17 j 23:35	25°♑21'04	2.63826 AU	greatest brilliancy	-3203 Sep 11 j 12:15	25°♑20'17	-2.1m
	-3208 May 25 j 04:20	0°♒		opposition	-3203 Sep 12 j 22:12	24°♑48'47	-3°-54'-48
morning rise	-3208 Jun 20 j 13:19	16°♒53'56		direct	-3203 Oct 17 j 03:17	17°♑25'59	
	-3208 Jul 11 j 04:18	0°♓			-3203 Dec 06 j 11:44	0°♐	
	-3208 Aug 27 j 19:50	0°♏		asc. node	-3203 Dec 09 j 16:11	1°♐21'57	
	-3208 Oct 15 j 04:31	0°♏			-3202 Feb 03 j 19:43	0°♑	
	-3208 Dec 04 j 11:22	0°♐			-3202 Mar 27 j 12:23	0°♒	
	-3207 Jan 31 j 13:55	0°♑			-3202 May 15 j 16:53	0°♓	
retrograde	-3207 Mar 23 j 13:10	12°♑45'06			-3202 Jul 01 j 21:08	0°♏	
opposition	-3207 Apr 24 j 08:12	7°♑07'04	0°13'12	evening set	-3202 Jul 10 j 08:21	5°♏31'44	
greatest brilliancy	-3207 Apr 14 j 23:05	9°♑44'58	-2.7m	max. Earth dist.	-3202 Jul 30 j 17:46	19°♏03'03	2.57764 AU
desc. node	-3207 Apr 27 j 14:16	6°♑08'51			-3202 Aug 15 j 22:22	0°♏	
min. Earth dist.	-3207 May 01 j 03:08	5°♑06'30	0.41384 AU				
direct	-3207 May 28 j 06:27	0°♑32'28		conjunction	-3202 Aug 27 j 03:44	7°♏42'28	1°01'34
	-3207 Aug 13 j 00:25	0°♌		minimum elong	-3202 Aug 27 j 05:01	7°♏44'42	1°01'39
	-3207 Sep 27 j 06:49	0°♍			-3202 Sep 27 j 20:30	0°♐	
	-3207 Nov 08 j 23:44	0°♎		morning rise	-3202 Oct 15 j 16:09	12°♐52'02	
	-3207 Dec 21 j 19:59	0°♏			-3202 Nov 07 j 22:13	0°♑	
	-3206 Feb 03 j 19:45	0°♐			-3202 Dec 17 j 15:14	0°♌	
asc. node	-3206 Mar 06 j 19:31	20°♐34'30		desc. node	-3202 Dec 18 j 14:01	0°♌43'35	
	-3206 Mar 21 j 05:15	0°♑			-3201 Jan 25 j 15:39	0°♍	
evening set	-3206 Apr 24 j 21:31	22°♑24'12			-3201 Mar 05 j 19:32	0°♎	
	-3206 May 06 j 18:09	0°♒			-3201 Apr 15 j 04:47	0°♏	
					-3201 May 28 j 11:37	0°♐	
conjunction	-3206 Jun 11 j 16:53	22°♒56'00	0°49'17		-3201 Jul 18 j 02:48	0°♑	
minimum elong	-3206 Jun 11 j 15:36	22°♒53'57	0°49'22	retrograde	-3201 Sep 16 j 10:38	18°♑19'24	
max. Earth dist.	-3206 Jun 11 j 00:42	22°♒30'12	2.67160 AU	min. Earth dist.	-3201 Oct 21 j 14:49	10°♑13'39	0.61455 AU
	-3206 Jun 22 j 18:56	0°♓		opposition	-3201 Oct 26 j 05:26	8°♑23'25	0°-3'-37
morning rise	-3206 Jul 27 j 03:11	21°♓58'13		greatest brilliancy	-3200 Jan 13 j 08:14	8°♑03'28	-2.3m
	-3206 Aug 08 j 14:39	0°♏		asc. node	-3201 Oct 27 j 16:55	7°♑48'10	
	-3206 Sep 23 j 18:20	0°♏			-3201 Nov 24 j 13:10	30°♒	
	-3206 Nov 08 j 04:01	0°♐		direct	-3201 Dec 03 j 03:14	29°♐31'12	
	-3206 Dec 23 j 02:24	0°♑			-3201 Dec 11 j 23:47	0°♑	
	-3205 Feb 06 j 06:14	0°♌			-3200 Mar 01 j 15:59	0°♒	
desc. node	-3205 Mar 15 j 16:11	23°♌51'43			-3200 Apr 24 j 04:55	0°♓	
	-3205 Mar 25 j 21:13	0°♍			-3200 Jun 11 j 20:15	0°♏	
retrograde	-3205 Jun 10 j 20:07	28°♍46'43			-3200 Jul 27 j 05:46	0°♏	
min. Earth dist.	-3205 Jul 07 j 15:41	24°♍21'11	0.39043 AU	evening set	-3200 Aug 21 j 11:18	17°♏31'11	
greatest brilliancy	-3205 Jul 11 j 11:41	23°♍15'52	-2.8m	max. Earth dist.	-3200 Sep 05 j 12:45	28°♏16'00	2.46233 AU
opposition	-3205 Jul 12 j 22:55	22°♍50'41	-6°-33'00		-3200 Sep 07 j 22:24	0°♐	
direct	-3205 Aug 11 j 22:56	17°♍37'50					
	-3205 Sep 28 j 22:40	0°♎		conjunction	-3200 Oct 13 j 20:57	26°♐32'02	0°14'55
	-3205 Nov 23 j 18:18	0°♏		minimum elong	-3200 Oct 13 j 21:53	26°♐33'47	0°14'54
	-3204 Jan 11 j 19:45	0°♐		behind sun begin	-3200 Oct 13 j 12:00	26°♐15'13	
asc. node	-3204 Jan 22 j 16:58	6°♐46'38		behind sun end	-3200 Oct 14 j 07:45	26°♐52'22	
	-3204 Feb 28 j 21:29	0°♑			-3200 Oct 18 j 11:11	0°♑	
	-3204 Apr 16 j 21:07	0°♒		desc. node	-3200 Nov 04 j 12:43	13°♑00'20	
evening set	-3204 Jun 01 j 17:53	28°♒52'23			-3200 Nov 26 j 12:19	0°♌	
	-3204 Jun 03 j 12:31	0°♓		morning rise	-3200 Dec 12 j 20:17	12°♌44'38	
max. Earth dist.	-3204 Jul 04 j 01:43	19°♓31'54	2.65061 AU		-3199 Jan 03 j 21:00	0°♍	
				greatest brilliancy	-3199 Jan 14 j 14:41	8°♍24'03	1.2m
conjunction	-3204 Jul 18 j 03:24	28°♓38'40	1°09'53		-3199 Feb 11 j 09:54	0°♎	
minimum elong	-3204 Jul 18 j 02:57	28°♓37'57	1°10'00		-3199 Mar 23 j 00:25	0°♏	
	-3204 Jul 20 j 05:22	0°♏			-3199 May 03 j 15:19	0°♐	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 21

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3199 Jun 17 j 11:46	0°♊			-3194 Nov 03 j 01:26	0°♏		
	-3199 Aug 07 j 15:12	0°♉			-3194 Dec 12 j 02:49	0°♐		
asc. node	-3199 Sep 13 j 17:18	16°♏42'57			-3193 Jan 21 j 08:16	0°♑		
retrograde	-3199 Oct 20 j 20:02	24°♏07'02		evening set	-3193 Feb 21 j 07:24	22°♑15'00		
opposition	-3199 Nov 29 j 21:28	14°♏19'48	2°43'31		-3193 Mar 04 j 08:23	0°♒		
min. Earth dist.	-3199 Nov 29 j 00:38	14°♏40'41	0.66872 AU					
greatest brilliancy	-3199 Nov 29 j 17:10	14°♏24'06	-1.3m	conjunction	-3193 Apr 17 j 01:46	29°♒49'43	0°-11'-18	
direct	-3198 Jan 09 j 03:09	4°♏38'54		minimum elong	-3193 Apr 17 j 02:19	29°♒50'37	0°11'19	
	-3198 Mar 29 j 13:33	0°♐		behind sun begin	-3193 Apr 16 j 10:55	29°♒24'54		
	-3198 May 21 j 20:42	0°♑		behind sun end	-3193 Apr 17 j 17:43	0°♑16'18		
	-3198 Jul 07 j 15:07	0°♒			-3193 Apr 17 j 07:56	0°♑		
	-3198 Aug 19 j 15:17	0°♓		asc. node	-3193 May 06 j 13:10	12°♑43'27		
desc. node	-3198 Sep 22 j 10:26	24°♓58'48		max. Earth dist.	-3193 May 08 j 18:03	14°♑10'14	2.61062 AU	
	-3198 Sep 29 j 01:26	0°♈			-3193 Jun 02 j 02:25	0°♈		
evening set	-3198 Oct 15 j 03:04	12°♈19'01		morning rise	-3193 Jun 06 j 13:53	2°♈53'00		
	-3198 Nov 06 j 20:23	0°♉			-3193 Jul 19 j 05:49	0°♐		
	-3198 Dec 14 j 22:59	0°♊			-3193 Sep 05 j 12:52	0°♑		
					-3193 Oct 25 j 15:15	0°♒		
conjunction	-3198 Dec 17 j 17:34	2°♏11'05	0°-53'-32		-3193 Dec 20 j 07:42	0°♓		
minimum elong	-3198 Dec 17 j 14:27	2°♏04'56	0°53'36	retrograde	-3192 Feb 25 j 08:45	19°♓40'19		
max. Earth dist.	-3197 Jan 16 j 06:29	25°♏18'55	2.37994 AU	opposition	-3192 Mar 29 j 20:49	13°♓11'52	2°39'11	
	-3197 Jan 22 j 07:29	0°♐		greatest brilliancy	-3192 Mar 31 j 04:04	12°♓46'04	-2.3m	
morning rise	-3197 Feb 24 j 04:05	25°♐03'55		min. Earth dist.	-3192 Apr 07 j 05:37	10°♓26'56	0.46230 AU	
	-3197 Mar 02 j 18:25	0°♑		direct	-3192 May 05 j 15:38	5°♓18'01		
	-3197 Apr 13 j 01:33	0°♒		desc. node	-3192 May 14 j 08:07	5°♓49'16		
	-3197 May 26 j 19:07	0°♓			-3192 Jul 13 j 18:05	0°♈		
	-3197 Jul 12 j 16:17	0°♉			-3192 Aug 28 j 10:53	0°♐		
asc. node	-3197 Aug 01 j 16:35	12°♏01'03			-3192 Oct 08 j 22:37	0°♑		
	-3197 Sep 02 j 22:06	0°♐			-3192 Nov 18 j 19:16	0°♒		
retrograde	-3197 Nov 25 j 00:13	27°♐43'26			-3192 Dec 30 j 11:00	0°♓		
opposition	-3196 Jan 03 j 05:09	18°♐31'52	4°28'39		-3191 Feb 11 j 14:47	0°♉		
greatest brilliancy	-3196 Jan 03 j 17:31	18°♐19'41	-1.3m	asc. node	-3191 Mar 23 j 10:29	26°♒41'51		
min. Earth dist.	-3196 Jan 06 j 04:25	17°♐21'40	0.65946 AU		-3191 Mar 28 j 10:45	0°♑		
direct	-3196 Feb 13 j 11:27	8°♐31'01		evening set	-3191 Apr 08 j 18:39	7°♑25'30		
	-3196 Apr 23 j 11:17	0°♑			-3191 May 13 j 15:45	0°♈		
	-3196 Jun 14 j 11:29	0°♒						
	-3196 Jul 28 j 23:23	0°♓		conjunction	-3191 May 27 j 21:09	9°♏07'11	0°35'24	
desc. node	-3196 Aug 09 j 07:49	8°♓07'34		minimum elong	-3191 May 27 j 19:59	9°♏05'19	0°35'27	
	-3196 Sep 07 j 20:48	0°♈		max. Earth dist.	-3191 Jun 01 j 21:48	12°♏20'03	2.66503 AU	
	-3196 Oct 16 j 19:11	0°♉			-3191 Jun 29 j 14:32	0°♐		
	-3196 Nov 23 j 23:47	0°♊		morning rise	-3191 Jul 13 j 02:31	8°♐35'57		
evening set	-3196 Dec 21 j 16:54	21°♏40'04			-3191 Aug 15 j 15:30	0°♑		
	-3195 Jan 01 j 11:29	0°♒			-3191 Oct 01 j 10:10	0°♒		
	-3195 Feb 10 j 03:07	0°♓			-3191 Nov 17 j 01:40	0°♓		
					-3190 Jan 03 j 08:06	0°♈		
conjunction	-3195 Feb 23 j 08:37	9°♑43'53	0°-58'-27		-3190 Feb 22 j 14:16	0°♉		
minimum elong	-3195 Feb 23 j 10:49	9°♑47'55	0°58'32	desc. node	-3190 Apr 01 j 07:49	18°♓32'58		
	-3195 Mar 23 j 14:13	0°♒		retrograde	-3190 May 11 j 16:35	27°♓40'54		
max. Earth dist.	-3195 Apr 06 j 01:17	9°♒25'26	2.50495 AU	opposition	-3190 Jun 11 j 05:46	22°♓36'03	-4°-51'-39	
morning rise	-3195 Apr 23 j 12:08	21°♒25'10		greatest brilliancy	-3190 Jun 11 j 02:20	22°♓38'20	-2.9m	
	-3195 May 06 j 04:58	0°♑		min. Earth dist.	-3190 Jun 10 j 22:05	22°♓41'10	0.37643 AU	
asc. node	-3195 Jun 18 j 15:37	28°♑27'24		direct	-3190 Jul 11 j 08:17	17°♓34'29		
	-3195 Jun 21 j 01:35	0°♒			-3190 Aug 27 j 09:57	0°♏		
	-3195 Aug 08 j 08:04	0°♐			-3190 Oct 20 j 00:18	0°♐		
	-3195 Sep 29 j 10:59	0°♑			-3190 Dec 05 j 22:07	0°♒		
	-3195 Dec 07 j 04:53	0°♒			-3189 Jan 21 j 02:17	0°♉		
retrograde	-3194 Jan 03 j 01:15	3°♒54'41		asc. node	-3189 Feb 08 j 08:50	11°♒47'41		
	-3194 Jan 27 j 23:47	30°♓00'00			-3189 Mar 08 j 18:49	0°♑		
opposition	-3194 Feb 09 j 05:51	25°♓44'04	4°56'43		-3189 Apr 25 j 01:15	0°♈		
greatest brilliancy	-3194 Feb 10 j 18:06	25°♓09'58	-1.6m	evening set	-3189 May 18 j 22:37	15°♏07'17		
min. Earth dist.	-3194 Feb 15 j 23:00	23°♓12'46	0.58622 AU		-3189 Jun 11 j 09:02	0°♐		
direct	-3194 Mar 21 j 20:05	16°♓02'12		max. Earth dist.	-3189 Jun 25 j 16:05	9°♐07'16	2.66517 AU	
	-3194 May 12 j 18:00	0°♒						
desc. node	-3194 Jun 27 j 07:46	25°♒33'48		conjunction	-3189 Jul 04 j 14:00	14°♐50'06	1°04'51	
	-3194 Jul 04 j 04:53	0°♓		minimum elong	-3189 Jul 04 j 13:04	14°♐48'36	1°04'56	
	-3194 Aug 16 j 07:44	0°♈			-3189 Jul 28 j 01:38	0°♑		
	-3194 Sep 25 j 05:37	0°♉		morning rise	-3189 Aug 18 j 16:26	14°♑07'59		

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 22

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3189 Sep 11 j 14:34	0°♈		min. Earth dist.	-3184 Nov 14 j 03:18	1°♌57'03	0.65494 AU
	-3189 Oct 25 j 19:25	0°♍		opposition	-3184 Nov 16 j 11:37	1°♌00'28	1°46'23
	-3189 Dec 07 j 19:08	0°♊		greatest brilliancy	-3184 Nov 16 j 05:34	1°♌06'33	-1.3m
	-3188 Jan 18 j 21:30	0°♋			-3184 Nov 19 j 00:01	30°♎♑	
desc. node	-3188 Feb 17 j 08:02	21°♋06'45		direct	-3184 Dec 25 j 22:50	21°♑34'53	
	-3188 Feb 29 j 19:04	0°♌			-3183 Feb 05 j 02:35	0°♌	
	-3188 Apr 13 j 03:24	0°♍			-3183 Apr 09 j 08:43	0°♎	
	-3188 Jun 03 j 09:12	0°♎			-3183 May 30 j 03:13	0°♏	
retrograde	-3188 Jul 17 j 14:00	11°♎50'13			-3183 Jul 15 j 04:50	0°♏	
min. Earth dist.	-3188 Aug 14 j 13:08	6°♎32'46	0.45544 AU		-3183 Aug 27 j 00:31	0°♐	
greatest brilliancy	-3188 Aug 20 j 16:11	4°♎26'34	-2.3m	evening set	-3183 Sep 21 j 22:27	19°♐03'48	
opposition	-3188 Aug 22 j 14:56	3°♎46'10	-5°-29'-20		-3183 Oct 06 j 10:42	0°♑	
	-3188 Sep 03 j 17:17	30°♎♑		desc. node	-3183 Oct 09 j 03:57	2°♑04'04	
direct	-3188 Sep 24 j 00:31	27°♑13'27		max. Earth dist.	-3183 Oct 21 j 09:41	11°♑26'37	2.38972 AU
	-3188 Oct 15 j 12:58	0°♑			-3183 Nov 14 j 07:11	0°♒	
	-3188 Dec 23 j 09:22	0°♒					
asc. node	-3188 Dec 26 j 07:57	1°♒36'29		conjunction	-3183 Nov 20 j 11:23	4°♒50'13	0°-29'-5
	-3187 Feb 13 j 16:39	0°♑		minimum elong	-3183 Nov 20 j 09:08	4°♒45'48	0°29'08
	-3187 Apr 04 j 10:40	0°♑			-3183 Dec 22 j 11:09	0°♒	
	-3187 May 22 j 20:45	0°♎		morning rise	-3182 Jan 26 j 19:16	27°♒38'40	
evening set	-3187 Jun 25 j 02:23	21°♎07'57			-3182 Jan 29 j 20:17	0°♑	
	-3187 Jul 08 j 18:58	0°♏			-3182 Mar 10 j 07:16	0°♑	
max. Earth dist.	-3187 Jul 19 j 18:41	7°♏11'33	2.61209 AU		-3182 Apr 20 j 15:07	0°♒	
					-3182 Jun 03 j 14:15	0°♑	
conjunction	-3187 Aug 10 j 23:22	21°♏56'52	1°08'51		-3182 Jul 21 j 09:32	0°♑	
minimum elong	-3187 Aug 10 j 23:58	21°♏57'54	1°08'57	asc. node	-3182 Aug 18 j 08:02	15°♑50'10	
	-3187 Aug 22 j 21:19	0°♏			-3182 Sep 15 j 22:52	0°♎	
morning rise	-3187 Sep 27 j 07:42	24°♏31'38		retrograde	-3182 Nov 11 j 01:44	14°♎48'10	
	-3187 Oct 05 j 01:21	0°♐		opposition	-3182 Dec 20 j 17:44	5°♎20'06	3°55'21
	-3187 Nov 15 j 11:56	0°♑		greatest brilliancy	-3182 Dec 20 j 21:59	5°♎15'53	-1.3m
	-3187 Dec 25 j 15:11	0°♒		min. Earth dist.	-3182 Dec 22 j 04:49	4°♎45'13	0.67093 AU
desc. node	-3186 Jan 04 j 07:28	7°♒20'04			-3181 Jan 03 j 21:59	30°♎♑	
	-3186 Feb 03 j 01:58	0°♒		direct	-3181 Jan 30 j 18:27	25°♑23'33	
	-3186 Mar 14 j 17:08	0°♑			-3181 Mar 01 j 00:28	0°♎	
	-3186 Apr 24 j 19:39	0°♑			-3181 May 06 j 08:05	0°♏	
	-3186 Jun 08 j 23:12	0°♒			-3181 Jun 24 j 08:47	0°♏	
	-3186 Aug 11 j 20:31	0°♑			-3181 Aug 07 j 01:48	0°♐	
retrograde	-3186 Sep 01 j 12:43	2°♑45'21		desc. node	-3181 Aug 27 j 02:33	14°♐34'15	
	-3186 Sep 21 j 04:12	30°♒♑			-3181 Sep 16 j 16:51	0°♑	
min. Earth dist.	-3186 Oct 04 j 19:30	25°♒20'05	0.57756 AU		-3181 Oct 25 j 12:36	0°♒	
opposition	-3186 Oct 10 j 19:22	22°♒59'01	-1°-26'-13	evening set	-3181 Nov 25 j 06:10	24°♒11'17	
greatest brilliancy	-3186 Oct 10 j 08:55	23°♒09'16	-1.7m		-3181 Dec 02 j 15:07	0°♒	
asc. node	-3186 Nov 13 j 07:34	14°♒39'18			-3180 Jan 10 j 00:12	0°♑	
direct	-3186 Nov 16 j 10:54	14°♒35'27					
	-3185 Jan 13 j 07:48	0°♑		conjunction	-3180 Jan 30 j 04:12	15°♑27'20	-1°-6'-51
	-3185 Mar 12 j 23:38	0°♑		minimum elong	-3180 Jan 30 j 04:48	15°♑28'29	1°06'59
	-3185 May 03 j 05:02	0°♎			-3180 Feb 18 j 12:35	0°♑	
	-3185 Jun 20 j 02:51	0°♏		max. Earth dist.	-3180 Mar 18 j 20:19	21°♑26'27	2.45309 AU
evening set	-3185 Aug 04 j 18:43	0°♏18'51			-3180 Mar 30 j 20:26	0°♒	
	-3185 Aug 04 j 07:41	0°♏		morning rise	-3180 Apr 02 j 19:36	2°♒05'39	
max. Earth dist.	-3185 Aug 20 j 11:45	11°♏09'37	2.51108 AU		-3180 May 13 j 10:06	0°♑	
	-3185 Sep 16 j 01:35	0°♐			-3180 Jun 28 j 11:48	0°♑	
				asc. node	-3180 Jul 05 j 06:09	4°♑15'25	
conjunction	-3185 Sep 24 j 08:32	6°♐00'03	0°37'54		-3180 Aug 16 j 16:44	0°♎	
minimum elong	-3185 Sep 24 j 10:15	6°♐03'09	0°37'55		-3180 Oct 11 j 13:13	0°♏	
	-3185 Oct 26 j 18:36	0°♑		retrograde	-3180 Dec 17 j 12:20	19°♏23'22	
morning rise	-3185 Nov 18 j 09:01	17°♑10'01		opposition	-3179 Jan 24 j 15:46	10°♏45'08	4°57'43
desc. node	-3185 Nov 22 j 05:24	20°♑07'09		greatest brilliancy	-3179 Jan 25 j 18:55	10°♏18'59	-1.4m
	-3185 Dec 05 j 01:02	0°♒		min. Earth dist.	-3179 Jan 29 j 22:55	8°♏42'48	0.62243 AU
	-3184 Jan 12 j 14:38	0°♒		direct	-3179 Mar 06 j 18:29	0°♏49'12	
	-3184 Feb 20 j 07:39	0°♑			-3179 May 28 j 01:56	0°♏	
	-3184 Mar 31 j 02:27	0°♑		desc. node	-3179 Jul 14 j 00:50	29°♏40'24	
	-3184 May 12 j 01:40	0°♒			-3179 Jul 14 j 12:18	0°♐	
	-3184 Jun 27 j 00:20	0°♑			-3179 Aug 25 j 09:09	0°♑	
	-3184 Aug 22 j 16:37	0°♑			-3179 Oct 03 j 18:13	0°♒	
asc. node	-3184 Sep 30 j 07:59	10°♑36'13			-3179 Nov 11 j 05:38	0°♒	
retrograde	-3184 Oct 07 j 09:17	10°♑55'19			-3179 Dec 19 j 23:35	0°♑	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 23

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3178 Jan 28 j 21:42	0°♊			-3174 Dec 16 j 20:41	0°♊	
evening set	-3178 Jan 30 j 04:41	0°♊57'00			-3173 Jan 29 j 14:14	0°♊	
	-3178 Mar 11 j 14:49	0°♋		desc. node	-3173 Mar 06 j 00:47	23°♊59'30	
					-3173 Mar 15 j 03:24	0°♋	
conjunction	-3178 Mar 29 j 07:22	12°♋17'49	0°-31'-18		-3173 May 04 j 06:12	0°♋	
minimum elong	-3178 Mar 29 j 08:58	12°♋20'33	0°31'20	retrograde	-3173 Jun 25 j 15:20	15°♋40'54	
	-3178 Apr 24 j 09:09	0°♌		min. Earth dist.	-3173 Jul 22 j 07:57	11°♋05'08	0.40960 AU
max. Earth dist.	-3178 Apr 27 j 11:38	2°♌04'35	2.57468 AU	greatest brilliancy	-3173 Jul 27 j 07:57	9°♋33'24	-2.6m
morning rise	-3178 May 21 j 15:14	18°♌01'40		opposition	-3173 Jul 29 j 05:23	8°♋58'17	-6°-32'-58
asc. node	-3178 May 23 j 04:48	19°♌03'01		direct	-3173 Aug 28 j 23:46	3°♋19'53	
	-3178 Jun 09 j 02:13	0°♍			-3173 Nov 14 j 07:23	0°♍	
	-3178 Jul 26 j 12:05	0°♎			-3172 Jan 05 j 07:46	0°♋	
	-3178 Sep 13 j 18:20	0°♏		asc. node	-3172 Jan 12 j 23:18	4°♋36'47	
	-3178 Nov 05 j 19:11	0°♐			-3172 Feb 23 j 11:57	0°♌	
	-3177 Jan 27 j 03:54	0°♍			-3172 Apr 11 j 23:56	0°♍	
retrograde	-3177 Feb 02 j 06:57	0°♍13'26			-3172 May 29 j 21:09	0°♎	
	-3177 Feb 08 j 06:38	30°♎♐		evening set	-3172 Jun 10 j 04:39	7°♎10'33	
opposition	-3177 Mar 09 j 10:17	22°♎59'13	4°04'07	max. Earth dist.	-3172 Jul 09 j 16:31	26°♎07'01	2.63906 AU
greatest brilliancy	-3177 Mar 11 j 04:12	22°♎22'09	-2.0m		-3172 Jul 15 j 15:54	0°♏	
min. Earth dist.	-3177 Mar 17 j 17:44	20°♎03'31	0.51414 AU				
direct	-3177 Apr 17 j 05:51	14°♎07'26		conjunction	-3172 Jul 26 j 15:19	7°♏10'54	1°10'52
desc. node	-3177 Jun 01 j 00:05	25°♎30'48		minimum elong	-3172 Jul 26 j 15:14	7°♏10'46	1°10'58
	-3177 Jun 10 j 08:55	0°♏			-3172 Aug 29 j 21:02	0°♐	
	-3177 Jul 29 j 21:20	0°♑		morning rise	-3172 Sep 10 j 15:11	7°♐59'34	
	-3177 Sep 09 j 20:47	0°♒			-3172 Oct 12 j 08:52	0°♑	
	-3177 Oct 19 j 19:27	0°♓			-3172 Nov 23 j 06:45	0°♑	
	-3177 Nov 28 j 16:34	0°♐			-3171 Jan 02 j 23:38	0°♒	
	-3176 Jan 08 j 14:36	0°♑		desc. node	-3171 Jan 21 j 00:22	13°♒28'26	
	-3176 Feb 20 j 04:26	0°♋			-3171 Feb 12 j 01:29	0°♓	
evening set	-3176 Mar 22 j 12:21	21°♋17'15			-3171 Mar 24 j 11:23	0°♐	
	-3176 Apr 04 j 14:11	0°♌			-3171 May 05 j 23:51	0°♑	
asc. node	-3176 Apr 09 j 03:22	3°♌00'38			-3171 Jun 25 j 00:03	0°♋	
				retrograde	-3171 Aug 16 j 06:21	15°♋17'35	
conjunction	-3176 May 12 j 09:31	24°♌44'15	0°18'48	min. Earth dist.	-3171 Sep 16 j 11:09	8°♋39'26	0.53301 AU
minimum elong	-3176 May 12 j 08:47	24°♌43'02	0°18'50	opposition	-3171 Sep 23 j 16:28	5°♋54'48	-2°-58'-53
	-3176 May 20 j 13:11	0°♍		greatest brilliancy	-3171 Sep 22 j 15:38	6°♋18'27	-1.9m
max. Earth dist.	-3176 May 23 j 15:26	1°♍59'32	2.64997 AU		-3171 Oct 12 j 03:53	30°♒♑	
morning rise	-3176 Jun 28 j 21:20	25°♍10'05		direct	-3171 Oct 28 j 20:26	28°♑07'42	
	-3176 Jul 06 j 11:43	0°♎			-3171 Nov 15 j 12:07	0°♋	
	-3176 Aug 22 j 20:51	0°♏		asc. node	-3171 Nov 29 j 23:05	3°♋47'41	
	-3176 Oct 09 j 12:59	0°♐			-3170 Jan 27 j 13:59	0°♌	
	-3176 Nov 27 j 03:17	0°♍			-3170 Mar 22 j 00:06	0°♍	
retrograde	-3175 Jan 18 j 02:53	0°♑			-3170 May 10 j 19:23	0°♎	
desc. node	-3175 Apr 09 j 18:08	28°♑02'11		evening set	-3170 Jun 27 j 05:41	0°♏	
opposition	-3175 Apr 18 j 00:46	27°♑36'31		max. Earth dist.	-3170 Jul 19 j 07:20	14°♏28'54	
greatest brilliancy	-3175 May 10 j 14:18	22°♑47'41	-1°-35'-51		-3170 Aug 06 j 16:57	26°♏50'16	2.55583 AU
min. Earth dist.	-3175 May 10 j 23:37	22°♑41'10	-2.8m		-3170 Aug 11 j 08:30	0°♐	
direct	-3175 May 15 j 12:26	21°♑25'17	0.39335 AU				
	-3175 Jun 11 j 21:31	16°♑56'56		conjunction	-3170 Sep 05 j 21:11	17°♐40'56	0°54'45
	-3175 Jul 29 j 09:39	0°♒		minimum elong	-3170 Sep 05 j 22:46	17°♐43'43	0°54'49
	-3175 Sep 18 j 15:19	0°♓			-3170 Sep 23 j 05:34	0°♑	
	-3175 Nov 02 j 04:39	0°♐		morning rise	-3170 Oct 27 j 00:40	24°♑40'28	
	-3175 Dec 16 j 00:10	0°♑			-3170 Nov 03 j 04:14	0°♑	
	-3174 Jan 29 j 13:48	0°♋		desc. node	-3170 Dec 09 j 00:13	27°♑09'09	
asc. node	-3174 Feb 25 j 00:48	17°♋26'23			-3170 Dec 12 j 17:17	0°♒	
	-3174 Mar 16 j 08:08	0°♌			-3169 Jan 20 j 13:05	0°♓	
	-3174 May 02 j 02:05	0°♍			-3169 Feb 28 j 11:47	0°♐	
evening set	-3174 May 03 j 19:11	1°♍05'30			-3169 Apr 09 j 13:42	0°♑	
max. Earth dist.	-3174 Jun 16 j 08:30	28°♍49'31	2.67154 AU		-3169 May 22 j 04:04	0°♋	
	-3174 Jun 18 j 04:43	0°♎			-3169 Jul 09 j 06:14	0°♌	
				retrograde	-3169 Sep 24 j 15:25	27°♌06'48	
conjunction	-3174 Jun 20 j 01:58	1°♎12'10	0°56'00	asc. node	-3169 Oct 17 j 22:39	23°♌21'58	
minimum elong	-3174 Jun 20 j 00:44	1°♎10'13	0°56'04	min. Earth dist.	-3169 Oct 30 j 19:04	18°♌40'36	0.63160 AU
	-3174 Aug 03 j 22:55	0°♏		opposition	-3169 Nov 03 j 14:12	17°♌09'19	0°39'47
morning rise	-3174 Aug 04 j 06:31	0°♏12'19		greatest brilliancy	-3169 Nov 03 j 10:34	17°♌12'58	-1.5m
	-3174 Sep 18 j 20:32	0°♐		direct	-3169 Dec 12 j 02:26	8°♌03'37	
	-3174 Nov 02 j 18:26	0°♑			-3168 Feb 22 j 18:57	0°♍	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 24

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3168 Apr 18 j 14:13	0°♊		conjunction	-3163 Mar 08 j 08:55	22°≈33'47	0°-49'-48
	-3168 Jun 06 j 21:25	0°♌		minimum elong	-3163 Mar 08 j 11:13	22°≈37'52	0°49'52
	-3168 Jul 22 j 12:34	0°♍			-3163 Mar 18 j 20:24	0°♋	
evening set	-3168 Sep 01 j 05:44	28°♌31'34		max. Earth dist.	-3163 Apr 14 j 12:43	18°♋31'31	2.53163 AU
	-3168 Sep 03 j 06:46	0°♎			-3163 May 01 j 11:18	0°♏	
max. Earth dist.	-3168 Sep 18 j 03:12	10°♎49'56	2.43502 AU	morning rise	-3163 May 04 j 05:45	1°♏51'19	
	-3168 Oct 13 j 19:00	0°♏		asc. node	-3163 Jun 08 j 21:06	25°♏16'46	
desc. node	-3168 Oct 25 j 22:13	9°♏14'21			-3163 Jun 16 j 05:07	0°♐	
					-3163 Aug 03 j 01:42	0°♑	
conjunction	-3168 Oct 26 j 14:08	9°♏44'49	0°00'-28		-3163 Sep 22 j 19:53	0°♒	
minimum elong	-3168 Oct 26 j 14:06	9°♏44'45	0°00'30		-3163 Nov 20 j 23:31	0°♓	
behind sun begin	-3168 Oct 25 j 13:21	8°♏57'22		retrograde	-3162 Jan 13 j 08:35	13°♓15'56	
behind sun end	-3168 Oct 27 j 14:52	10°♏32'11		opposition	-3162 Feb 18 j 21:21	5°♓23'27	4°45'47
	-3168 Nov 21 j 18:46	0°♑		greatest brilliancy	-3162 Feb 20 j 13:20	4°♓46'27	-1.7m
morning rise	-3168 Dec 28 j 12:03	28°♑46'17		min. Earth dist.	-3162 Feb 26 j 06:50	2°♓39'43	0.56254 AU
	-3168 Dec 30 j 01:36	0°♒			-3162 Mar 06 j 02:18	30°♒♌	
	-3167 Feb 06 j 12:32	0°♓		direct	-3162 Mar 31 j 00:07	25°♓54'42	
	-3167 Mar 18 j 00:42	0°♑			-3162 Apr 26 j 00:50	0°♓	
	-3167 Apr 28 j 11:04	0°♋		desc. node	-3162 Jun 17 j 17:17	24°♓34'19	
	-3167 Jun 11 j 20:11	0°♏			-3162 Jun 26 j 16:16	0°♎	
	-3167 Jul 31 j 06:11	0°♐			-3162 Aug 10 j 04:08	0°♏	
asc. node	-3167 Sep 03 j 22:37	17°♐37'30			-3162 Sep 19 j 15:06	0°♑	
	-3167 Oct 10 j 04:37	0°♑			-3162 Oct 28 j 18:11	0°♒	
retrograde	-3167 Oct 28 j 13:25	1°♑59'31			-3162 Dec 07 j 00:41	0°♓	
	-3167 Nov 14 j 21:41	30°♒♐			-3161 Jan 16 j 10:22	0°≈	
opposition	-3167 Dec 07 j 12:28	22°♒18'09	3°12'41		-3161 Feb 27 j 13:43	0°♋	
greatest brilliancy	-3167 Dec 07 j 10:32	22°♒20'05	-1.3m	evening set	-3161 Mar 04 j 18:38	3°♋36'42	
min. Earth dist.	-3167 Dec 07 j 11:43	22°♒18'53	0.67226 AU		-3161 Apr 12 j 15:37	0°♏	
direct	-3166 Jan 17 j 02:01	12°♒30'23					
	-3166 Mar 21 j 02:36	0°♑		conjunction	-3161 Apr 26 j 23:39	9°♏30'03	0°00'07
	-3166 May 16 j 02:12	0°♌		minimum elong	-3161 Apr 26 j 23:39	9°♏30'03	0°00'08
	-3166 Jul 02 j 12:54	0°♍		behind sun begin	-3161 Apr 26 j 02:49	8°♏55'45	
	-3166 Aug 14 j 18:48	0°♎		behind sun end	-3161 Apr 27 j 20:29	10°♏04'20	
desc. node	-3166 Sep 12 j 19:26	21°♎20'28		asc. node	-3161 Apr 26 j 18:56	9°♏22'20	
	-3166 Sep 24 j 06:42	0°♏		max. Earth dist.	-3161 May 14 j 19:50	21°♏10'44	2.62688 AU
evening set	-3166 Oct 29 j 09:22	27°♏06'32			-3161 May 28 j 10:34	0°♐	
	-3166 Nov 02 j 02:01	0°♑		morning rise	-3161 Jun 15 j 06:07	11°♐26'20	
	-3166 Dec 10 j 04:22	0°♒			-3161 Jul 14 j 11:14	0°♑	
					-3161 Aug 31 j 08:29	0°♌	
conjunction	-3165 Jan 02 j 14:34	18°♒23'41	-1°-2'-30		-3161 Oct 19 j 08:22	0°♍	
minimum elong	-3165 Jan 02 j 12:21	18°♒19'20	1°02'36		-3161 Dec 10 j 08:53	0°♎	
	-3165 Jan 17 j 12:36	0°♓			-3160 Feb 18 j 13:18	0°♏	
max. Earth dist.	-3165 Feb 18 j 01:13	24°♓04'09	2.40182 AU	retrograde	-3160 Mar 11 j 03:19	2°♏39'57	
	-3165 Feb 25 j 23:23	0°≈			-3160 Apr 01 j 01:15	30°♒♎	
morning rise	-3165 Mar 11 j 00:19	9°≈38'46		opposition	-3160 Apr 12 j 17:23	26°♎39'29	1°24'00
	-3165 Apr 08 j 05:36	0°♋		greatest brilliancy	-3160 Apr 13 j 10:08	26°♎26'23	-2.5m
	-3165 May 21 j 20:07	0°♏		min. Earth dist.	-3160 Apr 20 j 11:55	24°♎14'35	0.43432 AU
	-3165 Jul 07 j 07:04	0°♐		desc. node	-3160 May 04 j 16:32	20°♎41'37	
asc. node	-3165 Jul 22 j 22:45	9°♐36'40		direct	-3160 May 17 j 23:38	19°♎28'01	
	-3165 Aug 27 j 00:44	0°♑			-3160 Jun 28 j 23:10	0°♏	
	-3165 Oct 31 j 07:22	0°♌			-3160 Aug 19 j 21:48	0°♑	
retrograde	-3165 Dec 03 j 07:16	5°♌44'31			-3160 Oct 02 j 02:10	0°♒	
	-3164 Jan 02 j 12:31	30°♒♑			-3160 Nov 12 j 19:36	0°♓	
opposition	-3164 Jan 11 j 04:18	26°♑43'42	4°42'53		-3160 Dec 25 j 00:57	0°≈	
greatest brilliancy	-3164 Jan 11 j 21:49	26°♑26'34	-1.3m		-3159 Feb 06 j 13:56	0°♋	
min. Earth dist.	-3164 Jan 14 j 23:48	25°♑14'11	0.64906 AU	asc. node	-3159 Mar 13 j 17:08	23°♋27'33	
direct	-3164 Feb 21 j 11:09	16°♑42'34			-3159 Mar 23 j 16:06	0°♏	
	-3164 Apr 13 j 16:27	0°♌		evening set	-3159 Apr 18 j 02:26	16°♏32'14	
	-3164 Jun 08 j 06:30	0°♍			-3159 May 09 j 00:31	0°♐	
	-3164 Jul 23 j 14:01	0°♎					
desc. node	-3164 Jul 30 j 17:54	5°♎03'29		conjunction	-3159 Jun 05 j 10:14	17°♐31'05	0°43'48
	-3164 Sep 02 j 18:31	0°♏		minimum elong	-3159 Jun 05 j 08:58	17°♐29'04	0°43'53
	-3164 Oct 11 j 20:09	0°♑		max. Earth dist.	-3159 Jun 07 j 06:55	18°♐42'19	2.66969 AU
	-3164 Nov 19 j 02:25	0°♒			-3159 Jun 25 j 00:06	0°♑	
	-3164 Dec 27 j 15:22	0°♓		morning rise	-3159 Jul 21 j 03:39	16°♑41'26	
evening set	-3163 Jan 05 j 14:43	6°♓52'37			-3159 Aug 10 j 22:08	0°♌	
	-3163 Feb 05 j 08:19	0°≈			-3159 Sep 26 j 08:15	0°♍	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 25

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3159 Nov 11 j 06:13	0°♎				-3153 Mar 06 j 11:12	0°♏		
	-3159 Dec 27 j 01:34	0°♐				-3153 Apr 27 j 22:59	0°♑		
	-3158 Feb 11 j 20:42	0°♒				-3153 Jun 15 j 07:41	0°♓		
desc. node	-3158 Mar 22 j 18:00	23°♑00'14				-3153 Jul 30 j 16:21	0°♈		
	-3158 Apr 05 j 04:07	0°♉			evening set	-3153 Aug 14 j 15:50	10°♈18'53		
retrograde	-3158 May 29 j 05:38	15°♉43'01			max. Earth dist.	-3153 Aug 29 j 14:52	20°♈49'30	2.48457 AU	
min. Earth dist.	-3158 Jun 26 j 01:34	11°♉11'36	0.38036 AU			-3153 Sep 11 j 10:49	0°♊		
greatest brilliancy	-3158 Jun 28 j 11:37	10°♉32'09	-2.8m						
opposition	-3158 Jun 29 j 09:25	10°♉17'18	-6°-5'-58		conjunction	-3153 Oct 05 j 16:19	17°♊43'18	0°25'29	
direct	-3158 Jul 29 j 02:19	5°♉16'55			minimum elong	-3153 Oct 05 j 17:43	17°♊45'53	0°25'30	
	-3158 Oct 09 j 04:29	0°♊				-3153 Oct 22 j 02:16	0°♋		
	-3158 Nov 28 j 16:29	0°♋			desc. node	-3153 Nov 12 j 15:12	16°♋23'37		
	-3157 Jan 15 j 06:00	0°♌				-3153 Nov 30 j 06:14	0°♌		
asc. node	-3157 Jan 29 j 14:23	9°♌05'59			morning rise	-3153 Dec 02 j 07:58	1°♌36'30		
	-3157 Mar 03 j 15:15	0°♍				-3152 Jan 07 j 17:03	0°♍		
	-3157 Apr 20 j 06:27	0°♎				-3152 Feb 15 j 07:07	0°♎		
evening set	-3157 May 27 j 11:06	23°♎27'44				-3152 Mar 25 j 22:24	0°♏		
	-3157 Jun 06 j 18:26	0°♏				-3152 May 06 j 14:49	0°♐		
max. Earth dist.	-3157 Jul 01 j 03:08	15°♏33'25	2.65819 AU			-3152 Jun 20 j 18:23	0°♑		
						-3152 Aug 12 j 09:47	0°♒		
conjunction	-3157 Jul 12 j 21:40	23°♏08'28	1°08'15		asc. node	-3152 Sep 20 j 14:18	15°♒29'05		
minimum elong	-3157 Jul 12 j 21:00	23°♏07'24	1°08'21		retrograde	-3152 Oct 15 j 04:03	18°♒59'42		
	-3157 Jul 23 j 11:38	0°♓			min. Earth dist.	-3152 Nov 22 j 17:38	9°♒45'11	0.66375 AU	
morning rise	-3157 Aug 27 j 03:44	22°♓48'41			opposition	-3152 Nov 24 j 06:00	9°♒08'39	2°20'50	
	-3157 Sep 06 j 21:41	0°♈			greatest brilliancy	-3152 Nov 24 j 00:28	9°♒14'13	-1.3m	
	-3157 Oct 20 j 20:17	0°♉				-3152 Dec 25 j 22:30	30°♒♑		
	-3157 Dec 02 j 09:50	0°♊			direct	-3151 Jan 03 j 03:29	29°♑34'02		
	-3156 Jan 12 j 22:22	0°♋				-3151 Jan 11 j 15:04	0°♒		
desc. node	-3156 Feb 07 j 18:14	18°♋52'09				-3151 Apr 02 j 14:27	0°♓		
	-3156 Feb 23 j 00:02	0°♌				-3151 May 24 j 18:39	0°♓		
	-3156 Apr 04 j 20:28	0°♍				-3151 Jul 10 j 07:00	0°♈		
	-3156 May 20 j 17:58	0°♎				-3151 Aug 22 j 06:42	0°♉		
retrograde	-3156 Jul 29 j 01:55	25°♎10'41			desc. node	-3151 Sep 29 j 13:15	28°♉20'16		
min. Earth dist.	-3156 Aug 27 j 02:19	19°♎25'18	0.48304 AU			-3151 Oct 01 j 17:50	0°♊		
greatest brilliancy	-3156 Sep 02 j 11:05	17°♎08'20	-2.2m		evening set	-3151 Oct 04 j 16:53	2°♊15'07		
opposition	-3156 Sep 04 j 03:27	16°♎31'56	-4°-36'-50			-3151 Nov 09 j 14:03	0°♋		
direct	-3156 Oct 07 j 13:53	9°♎30'37			max. Earth dist.	-3151 Nov 28 j 09:44	14°♋46'59	2.37553 AU	
	-3156 Dec 13 j 22:02	0°♏							
asc. node	-3156 Dec 16 j 13:14	1°♏17'30			conjunction	-3151 Dec 05 j 14:03	20°♌26'21	0°-43'-57	
	-3155 Feb 07 j 11:01	0°♑			minimum elong	-3151 Dec 05 j 10:57	20°♌20'14	0°44'01	
	-3155 Mar 30 j 05:30	0°♒				-3151 Dec 17 j 17:14	0°♍		
	-3155 May 18 j 02:04	0°♓				-3150 Jan 25 j 01:20	0°♎		
evening set	-3155 Jul 03 j 18:29	29°♓43'45			morning rise	-3150 Feb 12 j 00:54	13°♓49'30		
	-3155 Jul 04 j 04:29	0°♈				-3150 Mar 05 j 11:14	0°♏		
max. Earth dist.	-3155 Jul 26 j 01:07	14°♈21'58	2.59399 AU			-3150 Apr 15 j 17:06	0°♐		
	-3155 Aug 18 j 07:07	0°♉				-3150 May 29 j 10:59	0°♑		
						-3150 Jul 15 j 14:05	0°♒		
conjunction	-3155 Aug 20 j 01:55	1°♉12'53	1°05'20		asc. node	-3150 Aug 08 j 13:31	14°♒07'33		
minimum elong	-3155 Aug 20 j 02:56	1°♉14'37	1°05'25			-3150 Sep 07 j 02:09	0°♓		
	-3155 Sep 30 j 08:53	0°♊			retrograde	-3150 Nov 19 j 00:36	22°♓38'24		
morning rise	-3155 Oct 07 j 12:05	5°♊06'05			opposition	-3150 Dec 28 j 10:52	13°♓19'10	4°15'51	
	-3155 Nov 10 j 15:08	0°♋			greatest brilliancy	-3150 Dec 28 j 19:31	13°♓10'37	-1.3m	
	-3155 Dec 20 j 13:06	0°♌			min. Earth dist.	-3150 Dec 30 j 18:21	12°♓24'15	0.66579 AU	
desc. node	-3155 Dec 25 j 16:46	3°♌55'27			direct	-3149 Feb 07 j 15:02	3°♓19'31		
	-3154 Jan 28 j 17:57	0°♍				-3149 Apr 29 j 02:21	0°♓		
	-3154 Mar 09 j 01:50	0°♎				-3149 Jun 18 j 17:42	0°♈		
	-3154 Apr 18 j 16:31	0°♏				-3149 Aug 01 j 22:31	0°♉		
	-3154 Jun 01 j 12:11	0°♐			desc. node	-3149 Aug 17 j 10:41	11°♉10'36		
	-3154 Jul 24 j 21:44	0°♑				-3149 Sep 11 j 17:59	0°♊		
retrograde	-3154 Sep 10 j 05:48	12°♑16'00				-3149 Oct 20 j 15:47	0°♋		
min. Earth dist.	-3154 Oct 14 j 14:03	4°♑27'15	0.59896 AU		greatest brilliancy	-3149 Nov 14 j 23:31	19°♋53'50	1.2m	
opposition	-3154 Oct 19 j 19:18	2°♑23'05	0°-37'-8			-3149 Nov 27 j 19:28	0°♌		
greatest brilliancy	-3154 Oct 19 j 15:16	2°♑27'05	-1.6m		evening set	-3149 Dec 10 j 19:18	10°♌12'30		
	-3154 Oct 25 j 22:59	30°♒♋				-3148 Jan 05 j 05:23	0°♍		
asc. node	-3154 Nov 03 j 14:00	27°♋05'21							
direct	-3154 Nov 26 j 03:45	23°♋42'48			conjunction	-3148 Feb 13 j 17:54	29°♍58'44	-1°-3'-18	
	-3154 Dec 30 j 17:00	0°♌			minimum elong	-3148 Feb 13 j 19:42	0°♎02'04	1°03'24	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 26

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3148 Feb 13 j 18:35	0°♊		opposition	-3143 May 28 j 01:44	9°♌39'46	-3°-31'-22
	-3148 Mar 26 j 02:52	0°♋		greatest brilliancy	-3143 May 28 j 09:01	9°♌34'52	-2.9m
max. Earth dist.	-3148 Mar 29 j 18:55	2°♋35'26	2.48213 AU	min. Earth dist.	-3143 May 30 j 06:13	9°♌04'25	0.38030 AU
morning rise	-3148 Apr 14 j 21:14	13°♋49'04		direct	-3143 Jun 27 j 23:43	4°♌22'52	
	-3148 May 08 j 15:32	0°♌			-3143 Sep 07 j 13:34	0°♍	
	-3148 Jun 23 j 12:31	0°♍			-3143 Oct 25 j 14:08	0°♎	
asc. node	-3148 Jun 25 j 12:52	1°♍16'55			-3143 Dec 09 j 19:38	0°♏	
	-3148 Aug 11 j 02:01	0°♎			-3142 Jan 24 j 03:45	0°♐	
	-3148 Oct 03 j 09:11	0°♏		asc. node	-3142 Feb 15 j 06:21	14°♐25'49	
retrograde	-3148 Dec 26 j 18:19	27°♏59'28			-3142 Mar 11 j 08:44	0°♑	
opposition	-3147 Feb 02 j 09:34	19°♏35'52	4°59'02		-3142 Apr 27 j 08:44	0°♒	
greatest brilliancy	-3147 Feb 03 j 18:02	19°♏04'57	-1.5m	evening set	-3142 May 12 j 13:02	9°♒38'04	
min. Earth dist.	-3147 Feb 08 j 12:00	17°♏16'35	0.60356 AU		-3142 Jun 13 j 14:11	0°♓	
direct	-3147 Mar 15 j 06:24	9°♏46'06		max. Earth dist.	-3142 Jun 21 j 17:57	5°♓12'11	2.66911 AU
	-3147 May 19 j 09:32	0°♐					
desc. node	-3147 Jul 04 j 10:12	27°♐27'57		conjunction	-3142 Jun 28 j 09:53	9°♓27'41	1°01'34
	-3147 Jul 08 j 05:58	0°♑		minimum elong	-3142 Jun 28 j 08:48	9°♓25'57	1°01'40
	-3147 Aug 19 j 19:03	0°♒			-3142 Jul 30 j 07:45	0°♔	
	-3147 Sep 28 j 11:13	0°♓		morning rise	-3142 Aug 12 j 11:33	8°♔33'23	
	-3147 Nov 06 j 02:54	0°♔			-3142 Sep 14 j 00:58	0°♕	
	-3147 Dec 15 j 00:02	0°♕			-3142 Oct 28 j 13:34	0°♖	
	-3146 Jan 24 j 01:07	0°♖			-3142 Dec 11 j 00:23	0°♗	
evening set	-3146 Feb 12 j 01:22	13°♖48'47			-3141 Jan 22 j 18:05	0°♘	
	-3146 Mar 06 j 20:48	0°♗		desc. node	-3141 Feb 24 j 10:32	22°♘57'45	
					-3141 Mar 06 j 13:29	0°♙	
conjunction	-3146 Apr 09 j 05:41	22°♗57'44	0°-19'-47		-3141 Apr 20 j 17:43	0°♚	
minimum elong	-3146 Apr 09 j 06:40	22°♗59'24	0°19'49		-3141 Jun 24 j 23:49	0°♛	
	-3146 Apr 19 j 16:45	0°♘		retrograde	-3141 Jul 09 j 01:48	1°♛24'12	
max. Earth dist.	-3146 May 04 j 02:22	9°♘34'39	2.59564 AU		-3141 Jul 23 j 01:34	30°♛	
asc. node	-3146 May 13 j 10:53	15°♘44'08		min. Earth dist.	-3141 Aug 05 j 07:30	26°♛28'16	0.43372 AU
morning rise	-3146 May 30 j 21:39	27°♘05'55		greatest brilliancy	-3141 Aug 11 j 02:14	24°♛34'38	-2.5m
	-3146 Jun 04 j 09:24	0°♙		opposition	-3141 Aug 13 j 02:58	23°♛54'25	-6°-3'-44
	-3146 Jul 21 j 14:34	0°♚		direct	-3141 Sep 13 j 17:24	17°♛46'12	
	-3146 Sep 08 j 05:51	0°♛			-3141 Nov 01 j 07:07	0°♜	
	-3146 Oct 29 j 08:29	0°♕			-3141 Dec 29 j 02:54	0°♝	
	-3146 Dec 28 j 11:38	0°♖		asc. node	-3140 Jan 03 j 05:27	2°♝56'23	
retrograde	-3145 Feb 14 j 20:43	11°♖18'07			-3140 Feb 17 j 20:04	0°♞	
opposition	-3145 Mar 21 j 03:02	4°♖28'05	3°21'43		-3140 Apr 06 j 23:40	0°♟	
greatest brilliancy	-3145 Mar 22 j 16:45	3°♖55'48	-2.1m		-3140 May 25 j 04:11	0°♠	
min. Earth dist.	-3145 Mar 29 j 14:24	1°♖34'58	0.48570 AU	evening set	-3140 Jun 18 j 17:09	15°♠34'44	
	-3145 Apr 03 j 14:43	30°♖			-3140 Jul 11 j 01:28	0°♡	
direct	-3145 Apr 27 j 21:27	26°♖05'12		max. Earth dist.	-3140 Jul 15 j 13:27	2°♡56'02	2.62520 AU
desc. node	-3145 May 22 j 10:40	29°♖55'29					
	-3145 May 22 j 16:46	0°♗		conjunction	-3140 Aug 04 j 07:57	15°♡57'43	1°10'18
	-3145 Jul 21 j 12:05	0°♘		minimum elong	-3140 Aug 04 j 08:16	15°♡58'15	1°10'24
	-3145 Sep 03 j 03:45	0°♙			-3140 Aug 25 j 05:59	0°♓	
	-3145 Oct 13 j 20:14	0°♚		morning rise	-3140 Sep 19 j 23:24	17°♓39'06	
	-3145 Nov 23 j 04:16	0°♛			-3140 Oct 07 j 14:25	0°♔	
	-3144 Jan 03 j 10:18	0°♜			-3140 Nov 18 j 06:38	0°♕	
	-3144 Feb 15 j 06:14	0°♝			-3140 Dec 28 j 16:05	0°♖	
asc. node	-3144 Mar 30 j 08:02	29°♝39'43		desc. node	-3139 Jan 11 j 10:32	10°♖22'15	
	-3144 Mar 30 j 20:19	0°♞			-3139 Feb 06 j 09:07	0°♗	
evening set	-3144 Apr 01 j 13:20	1°♞07'42			-3139 Mar 18 j 06:48	0°♘	
	-3144 May 15 j 21:42	0°♟			-3139 Apr 28 j 19:57	0°♙	
					-3139 Jun 14 j 06:52	0°♚	
conjunction	-3144 May 21 j 08:59	3°♟31'03	0°28'44	retrograde	-3139 Aug 25 j 18:53	25°♟56'28	
minimum elong	-3144 May 21 j 07:57	3°♟29'23	0°28'47	min. Earth dist.	-3139 Sep 27 j 03:31	18°♟51'08	0.55839 AU
max. Earth dist.	-3144 May 29 j 04:50	8°♟32'15	2.65941 AU	opposition	-3139 Oct 03 j 16:49	16°♟18'36	-2°-4'-30
	-3144 Jul 01 j 19:57	0°♠		greatest brilliancy	-3139 Oct 03 j 00:37	16°♟34'21	-1.8m
morning rise	-3144 Jul 07 j 02:03	3°♠20'36		direct	-3139 Nov 08 j 17:01	8°♟10'12	
	-3144 Aug 18 j 00:07	0°♡		asc. node	-3139 Nov 20 j 05:06	8°♟59'14	
	-3144 Oct 04 j 03:29	0°♓			-3138 Jan 19 j 03:58	0°♞	
	-3144 Nov 20 j 12:58	0°♔			-3138 Mar 16 j 04:25	0°♟	
	-3143 Jan 08 j 09:14	0°♕			-3138 May 05 j 18:45	0°♠	
	-3143 Mar 04 j 15:43	0°♖			-3138 Jun 22 j 12:19	0°♡	
desc. node	-3143 Apr 08 j 10:16	12°♖28'12		evening set	-3138 Jul 28 j 14:17	23°♖48'31	
retrograde	-3143 Apr 27 j 15:10	14°♖42'07			-3138 Aug 06 j 17:20	0°♗	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 27

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

max. Earth dist.	-3138 Aug 14 j 09:11	5°♂14'54	2.53175 AU			-3133 May 16 j 22:37	0°♂	
						-3133 Jul 02 j 02:16	0°♂	
conjunction	-3138 Sep 16 j 04:15	28°♂16'50	0°45'50	asc. node		-3133 Jul 13 j 03:43	6°♂54'25	
minimum elong	-3138 Sep 16 j 05:59	28°♂19'55	0°45'53			-3133 Aug 20 j 18:40	0°♂	
	-3138 Sep 18 j 13:49	0°♂				-3133 Oct 18 j 02:46	0°♂	
	-3138 Oct 29 j 10:11	0°♂		retrograde		-3133 Dec 11 j 21:11	13°♂54'34	
morning rise	-3138 Nov 08 j 07:16	7°♂26'14		opposition		-3132 Jan 19 j 08:57	5°♂05'48	4°52'50
desc. node	-3138 Nov 29 j 08:29	23°♂28'34		greatest brilliancy		-3132 Jan 20 j 07:51	4°♂43'33	-1.4m
	-3138 Dec 07 j 20:02	0°♂		min. Earth dist.		-3132 Jan 24 j 00:20	3°♂17'40	0.63560 AU
	-3137 Jan 15 j 12:32	0°♂				-3132 Feb 02 j 00:14	30°♂	
	-3137 Feb 23 j 07:29	0°♂		direct		-3132 Feb 29 j 14:10	25°♂06'29	
	-3137 Apr 04 j 04:04	0°♂				-3132 Mar 30 j 04:54	0°♂	
	-3137 May 16 j 07:14	0°♂				-3132 Jun 01 j 11:51	0°♂	
	-3137 Jul 01 j 20:33	0°♂				-3132 Jul 17 j 23:05	0°♂	
	-3137 Sep 01 j 11:50	0°♂		desc. node		-3132 Jul 21 j 03:45	2°♂12'53	
retrograde	-3137 Oct 02 j 14:54	5°♂33'14				-3132 Aug 28 j 13:20	0°♂	
asc. node	-3137 Oct 08 j 05:21	5°♂20'31				-3132 Oct 06 j 19:23	0°♂	
	-3137 Oct 31 j 09:00	30°♂				-3132 Nov 14 j 04:22	0°♂	
min. Earth dist.	-3137 Nov 08 j 15:55	26°♂48'38	0.64560 AU			-3132 Dec 22 j 19:17	0°♂	
opposition	-3137 Nov 11 j 15:41	25°♂36'32	1°19'43	evening set		-3131 Jan 19 j 19:23	21°♂14'39	
greatest brilliancy	-3137 Nov 11 j 09:58	25°♂42'16	-1.4m			-3131 Jan 31 j 13:51	0°♂	
direct	-3137 Dec 20 j 16:34	16°♂19'15				-3131 Mar 14 j 03:19	0°♂	
	-3136 Feb 13 j 06:35	0°♂						
	-3136 Apr 12 j 16:18	0°♂		conjunction		-3131 Mar 20 j 13:26	4°♂30'31	0°-39'-31
	-3136 Jun 01 j 19:50	0°♂		minimum elong		-3131 Mar 20 j 15:25	4°♂33'58	0°39'33
	-3136 Jul 17 j 18:04	0°♂		max. Earth dist.		-3131 Apr 22 j 05:13	26°♂56'04	2.55618 AU
	-3136 Aug 29 j 14:22	0°♂				-3131 Apr 26 j 18:31	0°♂	
evening set	-3136 Sep 12 j 16:25	10°♂16'02		morning rise		-3131 May 14 j 09:10	11°♂43'11	
max. Earth dist.	-3136 Oct 04 j 07:37	26°♂23'11	2.40841 AU	asc. node		-3131 May 30 j 02:23	22°♂01'00	
	-3136 Oct 09 j 02:18	0°♂				-3131 Jun 11 j 10:33	0°♂	
desc. node	-3136 Oct 16 j 06:37	5°♂27'45				-3131 Jul 28 j 23:30	0°♂	
						-3131 Sep 16 j 18:01	0°♂	
conjunction	-3136 Nov 09 j 07:07	23°♂58'38	0°-16'-46			-3131 Nov 10 j 15:42	0°♂	
minimum elong	-3136 Nov 09 j 05:50	23°♂56'09	0°16'49	retrograde		-3130 Jan 24 j 08:33	23°♂05'47	
	-3136 Nov 17 j 00:38	0°♂		opposition		-3130 Mar 01 j 03:10	15°♂33'29	4°25'41
	-3136 Dec 25 j 05:56	0°♂		greatest brilliancy		-3130 Mar 02 j 21:07	14°♂55'29	-1.9m
morning rise	-3135 Jan 13 j 22:39	15°♂27'08		min. Earth dist.		-3130 Mar 09 j 01:55	12°♂41'20	0.53653 AU
	-3135 Feb 01 j 15:22	0°♂		direct		-3130 Apr 09 j 14:01	6°♂22'43	
	-3135 Mar 13 j 01:52	0°♂		desc. node		-3130 Jun 08 j 02:39	24°♂44'57	
	-3135 Apr 23 j 09:23	0°♂				-3130 Jun 17 j 17:00	0°♂	
	-3135 Jun 06 j 10:20	0°♂				-3130 Aug 03 j 12:04	0°♂	
	-3135 Jul 24 j 16:55	0°♂				-3130 Sep 13 j 17:17	0°♂	
asc. node	-3135 Aug 25 j 05:22	17°♂15'06				-3130 Oct 23 j 06:14	0°♂	
	-3135 Sep 22 j 08:29	0°♂				-3130 Dec 01 j 19:37	0°♂	
retrograde	-3135 Nov 05 j 07:22	9°♂46'57				-3129 Jan 11 j 10:41	0°♂	
opposition	-3135 Dec 15 j 02:43	0°♂12'36	3°38'33			-3129 Feb 22 j 18:26	0°♂	
greatest brilliancy	-3135 Dec 15 j 03:58	0°♂11'22	-1.2m	evening set		-3129 Mar 15 j 15:47	14°♂20'01	
	-3135 Dec 15 j 15:21	30°♂				-3129 Apr 07 j 23:14	0°♂	
min. Earth dist.	-3135 Dec 15 j 21:55	29°♂53'26	0.67282 AU	asc. node		-3129 Apr 17 j 01:05	6°♂00'57	
direct	-3134 Jan 24 j 22:38	20°♂19'22						
	-3134 Mar 10 j 07:44	0°♂		conjunction		-3129 May 06 j 12:17	18°♂47'13	0°11'10
	-3134 May 09 j 22:58	0°♂		minimum elong		-3129 May 06 j 11:49	18°♂46'27	0°11'12
	-3134 Jun 27 j 07:42	0°♂		behind sun begin		-3129 May 05 j 21:01	18°♂22'21	
	-3134 Aug 09 j 21:10	0°♂		behind sun end		-3129 May 07 j 02:36	19°♂10'31	
desc. node	-3134 Sep 03 j 05:25	17°♂46'55		max. Earth dist.		-3129 May 20 j 15:36	27°♂57'39	2.64062 AU
	-3134 Sep 19 j 11:42	0°♂				-3129 May 23 j 19:22	0°♂	
	-3134 Oct 28 j 07:38	0°♂		morning rise		-3129 Jun 23 j 17:27	19°♂48'58	
evening set	-3134 Nov 13 j 07:51	12°♂34'52				-3129 Jul 09 j 18:03	0°♂	
	-3134 Dec 05 j 09:59	0°♂				-3129 Aug 26 j 07:39	0°♂	
	-3133 Jan 12 j 17:59	0°♂				-3129 Oct 13 j 12:00	0°♂	
						-3129 Dec 02 j 07:12	0°♂	
conjunction	-3133 Jan 18 j 08:58	4°♂20'44	-1°-6'-45			-3128 Jan 27 j 05:38	0°♂	
minimum elong	-3133 Jan 18 j 08:20	4°♂19'30	1°06'52	retrograde		-3128 Mar 27 j 06:51	16°♂49'39	
	-3133 Feb 21 j 04:31	0°♂		desc. node		-3128 Apr 25 j 02:59	12°♂04'04	
max. Earth dist.	-3133 Mar 09 j 07:41	11°♂54'48	2.42948 AU	opposition		-3128 Apr 27 j 20:20	11°♂16'37	0°-11'-9
morning rise	-3133 Mar 24 j 22:18	23°♂13'27		greatest brilliancy		-3128 Apr 17 j 14:28	14°♂05'13	-2.7m
	-3133 Apr 03 j 10:20	0°♂		min. Earth dist.		-3128 May 04 j 09:47	9°♂21'36	0.40959 AU

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

direct	-3128 May 31 j 11:48	4°♌50'32		-3123 Aug 13 j 17:00	0°♏	
	-3128 Aug 09 j 03:00	0°♌				
	-3128 Sep 24 j 09:43	0°♍	conjunction	-3123 Aug 29 j 11:37	10°♏50'14	0°59'58
	-3128 Nov 06 j 10:13	0°♎	minimum elong	-3123 Aug 29 j 12:59	10°♏52'37	1°00'02
	-3128 Dec 19 j 09:22	0°♏		-3123 Sep 25 j 17:09	0°♐	
	-3127 Feb 01 j 10:04	0°♐	morning rise	-3123 Oct 18 j 06:42	16°♐18'46	
asc. node	-3127 Mar 03 j 22:25	20°♐15'34		-3123 Nov 05 j 19:59	0°♑	
	-3127 Mar 18 j 19:41	0°♑		-3123 Dec 15 j 13:10	0°♒	
evening set	-3127 Apr 27 j 04:20	25°♑24'20	desc. node	-3123 Dec 16 j 02:48	0°♒26'03	
	-3127 May 04 j 08:35	0°♒		-3122 Jan 23 j 12:47	0°♓	
				-3122 Mar 03 j 14:40	0°♓	
conjunction	-3127 Jun 13 j 21:06	25°♓50'42	0°51'16	-3122 Apr 12 j 20:09	0°♐	
minimum elong	-3127 Jun 13 j 19:49	25°♓48'40	0°51'21	-3122 May 25 j 19:01	0°♐	
max. Earth dist.	-3127 Jun 12 j 14:20	25°♓01'41	2.67172 AU	-3122 Jul 14 j 07:06	0°♑	
	-3127 Jun 20 j 09:33	0°♑	retrograde	-3122 Sep 18 j 15:21	21°♑22'05	
morning rise	-3127 Jul 29 j 06:02	24°♑51'55	min. Earth dist.	-3122 Oct 24 j 00:08	13°♑11'33	0.61822 AU
	-3127 Aug 06 j 05:23	0°♒	asc. node	-3122 Oct 24 j 19:57	12°♑51'51	
	-3127 Sep 21 j 08:38	0°♒	opposition	-3122 Oct 28 j 10:20	11°♑25'26	0°08'49
	-3127 Nov 05 j 16:38	0°♓	greatest brilliancy	-3122 Nov 09 j 11:10	6°♑55'38	-1.6m
	-3127 Dec 20 j 11:09	0°♑	direct	-3122 Dec 05 j 10:13	2°♑30'15	
	-3126 Feb 03 j 06:52	0°♒		-3121 Feb 27 j 05:49	0°♓	
desc. node	-3126 Mar 13 j 03:12	24°♒31'42		-3121 Apr 22 j 11:57	0°♑	
	-3126 Mar 21 j 23:33	0°♓		-3121 Jun 10 j 10:06	0°♒	
	-3126 May 22 j 13:52	0°♓		-3121 Jul 25 j 23:47	0°♓	
retrograde	-3126 Jun 14 j 06:37	3°♓21'44	evening set	-3121 Aug 24 j 23:31	20°♓49'44	
	-3126 Jul 07 j 02:17	30°♒♓		-3121 Sep 06 j 19:22	0°♓	
min. Earth dist.	-3126 Jul 11 j 01:59	28°♓54'16	0.39361 AU	max. Earth dist.	-3121 Sep 09 j 09:58	1°♓52'59 2.45736 AU
greatest brilliancy	-3126 Jul 15 j 02:47	27°♓44'23	-2.7m			
opposition	-3126 Jul 16 j 16:12	27°♓17'08	-6°-36'-41	conjunction	-3121 Oct 17 j 17:15	0°♑13'29 0°11'17
direct	-3126 Aug 15 j 20:22	21°♓59'53		minimum elong	-3121 Oct 17 j 17:59	0°♑14'51 0°11'18
	-3126 Sep 22 j 07:29	0°♓		behind sun begin	-3121 Oct 17 j 00:20	29°♓41'34
	-3126 Nov 20 j 10:23	0°♐		behind sun end	-3121 Oct 18 j 11:37	0°♑48'10
	-3125 Jan 09 j 01:28	0°♐			-3121 Oct 17 j 10:07	0°♑
asc. node	-3125 Jan 19 j 20:35	6°♐41'05		desc. node	-3121 Nov 03 j 00:51	12°♑38'35
	-3125 Feb 26 j 07:58	0°♑			-3121 Nov 25 j 12:13	0°♒
	-3125 Apr 15 j 09:55	0°♓	morning rise	-3121 Dec 17 j 06:22	16°♒59'08	
	-3125 Jun 02 j 03:03	0°♑			-3120 Jan 02 j 20:53	0°♓
evening set	-3125 Jun 04 j 22:02	1°♑46'11	greatest brilliancy	-3120 Jan 03 j 13:23	0°♓32'19	1.2m
max. Earth dist.	-3125 Jul 06 j 15:36	22°♑03'53	2.64859 AU		-3120 Feb 10 j 08:40	0°♓
	-3125 Jul 18 j 21:29	0°♒			-3120 Mar 20 j 20:54	0°♐
					-3120 May 01 j 07:59	0°♐
conjunction	-3125 Jul 21 j 07:19	1°♒34'08	1°10'17		-3120 Jun 14 j 21:29	0°♑
minimum elong	-3125 Jul 21 j 06:59	1°♒33'35	1°10'24		-3120 Aug 04 j 05:40	0°♓
	-3125 Sep 02 j 05:31	0°♓		asc. node	-3120 Sep 10 j 19:19	17°♓43'35
morning rise	-3125 Sep 04 j 21:24	1°♓47'45		retrograde	-3120 Oct 22 j 21:43	26°♓56'58
	-3125 Oct 15 j 22:35	0°♓		opposition	-3120 Dec 01 j 22:10	17°♓10'46 2°52'12
	-3125 Nov 27 j 03:42	0°♑		min. Earth dist.	-3120 Dec 01 j 05:32	17°♓27'28 0.66974 AU
	-3124 Jan 07 j 04:53	0°♒		greatest brilliancy	-3120 Dec 01 j 18:13	17°♓14'43 -1.3m
desc. node	-3124 Jan 29 j 02:43	16°♒13'31		direct	-3119 Jan 11 j 04:39	7°♓28'17
	-3124 Feb 16 j 16:11	0°♓			-3119 Mar 25 j 23:36	0°♑
	-3124 Mar 28 j 13:52	0°♓			-3119 May 19 j 04:38	0°♒
	-3124 May 11 j 02:12	0°♐			-3119 Jul 05 j 06:53	0°♓
	-3124 Jul 05 j 07:04	0°♐			-3119 Aug 17 j 11:21	0°♓
retrograde	-3124 Aug 08 j 18:06	7°♐24'52		desc. node	-3119 Sep 19 j 22:14	24°♓39'11
min. Earth dist.	-3124 Sep 07 j 23:00	1°♐09'37	0.51112 AU		-3119 Sep 26 j 23:58	0°♑
	-3124 Sep 11 j 02:32	30°♒♐		evening set	-3119 Oct 18 j 07:23	16°♑20'42
greatest brilliancy	-3124 Sep 14 j 07:02	28°♐48'26	-2.0m		-3119 Nov 04 j 20:08	0°♒
opposition	-3124 Sep 15 j 14:41	28°♐18'54	-3°-40'-44		-3119 Dec 12 j 22:54	0°♓
direct	-3124 Oct 20 j 01:15	20°♐50'56				
	-3124 Nov 30 j 21:55	0°♐		conjunction	-3119 Dec 21 j 06:36	6°♓33'06 0°-56'00
asc. node	-3124 Dec 06 j 20:19	2°♐20'46		minimum elong	-3119 Dec 21 j 03:36	6°♓27'11 0°56'05
	-3123 Jan 31 j 16:33	0°♑			-3118 Jan 20 j 06:37	0°♓
	-3123 Mar 24 j 20:09	0°♓	max. Earth dist.	-3118 Jan 25 j 03:21	3°♓45'43	2.38323 AU
	-3123 May 13 j 05:31	0°♑	morning rise	-3118 Feb 27 j 14:54	29°♓13'14	
	-3123 Jun 29 j 13:06	0°♒			-3118 Feb 28 j 15:56	0°♐
evening set	-3123 Jul 12 j 13:19	8°♒29'33			-3118 Apr 10 j 20:36	0°♐
max. Earth dist.	-3123 Aug 01 j 15:35	21°♒50'42	2.57382 AU		-3118 May 24 j 10:35	0°♑

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 29

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3118 Jul 10 j 01:39	0°♄		desc. node	-3113 May 12 j 18:54	9°♎18'59	
asc. node	-3118 Jul 29 j 19:37	11°♄57'54			-3113 Jul 10 j 16:33	0°♎	
	-3118 Aug 30 j 15:24	0°♎			-3113 Aug 26 j 14:20	0°♎	
	-3118 Nov 17 j 12:33	0°♎			-3113 Oct 07 j 10:37	0°♎	
retrograde	-3118 Nov 27 j 03:29	0°♎33'11			-3113 Nov 17 j 10:43	0°♎	
	-3118 Dec 06 j 11:06	30°♎			-3113 Dec 29 j 03:36	0°♎	
opposition	-3117 Jan 05 j 06:44	21°♎23'44	4°32'41		-3112 Feb 10 j 07:19	0°♎	
greatest brilliancy	-3117 Jan 05 j 20:11	21°♎10'30	-1.3m	asc. node	-3112 Mar 20 j 14:38	26°♎22'21	
min. Earth dist.	-3117 Jan 08 j 10:08	20°♎09'29	0.65782 AU		-3112 Mar 26 j 02:38	0°♎	
direct	-3117 Feb 15 j 12:49	11°♎22'27		evening set	-3112 Apr 11 j 03:15	10°♎29'37	
	-3117 Apr 20 j 16:26	0°♎			-3112 May 11 j 07:01	0°♎	
	-3117 Jun 12 j 20:05	0°♎					
	-3117 Jul 27 j 16:32	0°♎		conjunction	-3112 May 30 j 01:30	12°♎01'47	0°37'48
desc. node	-3117 Aug 07 j 20:39	7°♎57'19		minimum elong	-3112 May 30 j 00:17	11°♎59'51	0°37'52
	-3117 Sep 06 j 17:57	0°♎		max. Earth dist.	-3112 Jun 03 j 15:03	14°♎56'46	2.66612 AU
	-3117 Oct 15 j 18:09	0°♎			-3112 Jun 27 j 05:28	0°♎	
	-3117 Nov 22 j 23:07	0°♎		morning rise	-3112 Jul 15 j 03:54	11°♎25'43	
evening set	-3117 Dec 26 j 03:00	25°♎54'29			-3112 Aug 13 j 06:04	0°♎	
	-3117 Dec 31 j 10:05	0°♎			-3112 Sep 28 j 23:29	0°♎	
	-3116 Feb 09 j 00:13	0°♎			-3112 Nov 14 j 11:24	0°♎	
					-3112 Dec 31 j 09:08	0°♎	
conjunction	-3116 Feb 27 j 11:21	13°♎33'57	0°-56'-26		-3111 Feb 18 j 14:03	0°♎	
minimum elong	-3116 Feb 27 j 13:39	13°♎38'09	0°56'31	desc. node	-3111 Mar 29 j 20:05	20°♎28'31	
	-3116 Mar 21 j 09:21	0°♎			-3111 Apr 25 j 23:14	0°♎	
max. Earth dist.	-3116 Apr 08 j 05:12	12°♎28'35	2.51012 AU	retrograde	-3111 May 15 j 17:13	2°♎25'37	
morning rise	-3116 Apr 26 j 04:27	24°♎47'11			-3111 Jun 04 j 16:38	30°♎	
	-3116 May 03 j 21:44	0°♎		min. Earth dist.	-3111 Jun 14 j 08:08	27°♎34'08	0.37620 AU
asc. node	-3116 Jun 15 j 18:42	28°♎09'51		opposition	-3111 Jun 15 j 07:02	27°♎18'55	-5°-12'-32
	-3116 Jun 18 j 15:24	0°♎		greatest brilliancy	-3111 Jun 15 j 00:07	27°♎23'31	-2.9m
	-3116 Aug 05 j 16:58	0°♎		direct	-3111 Jul 15 j 04:04	22°♎19'45	
	-3116 Sep 26 j 07:05	0°♎			-3111 Aug 20 j 06:08	0°♎	
	-3116 Nov 29 j 14:24	0°♎			-3111 Oct 16 j 12:47	0°♎	
retrograde	-3115 Jan 05 j 13:50	6°♎58'47			-3111 Dec 03 j 02:18	0°♎	
	-3115 Feb 08 j 12:48	30°♎			-3110 Jan 18 j 12:13	0°♎	
opposition	-3115 Feb 11 j 14:41	28°♎51'33	4°53'46	asc. node	-3110 Feb 05 j 12:11	11°♎35'14	
greatest brilliancy	-3115 Feb 13 j 03:39	28°♎16'49	-1.6m		-3110 Mar 06 j 07:10	0°♎	
min. Earth dist.	-3115 Feb 18 j 10:30	26°♎17'57	0.58201 AU		-3110 Apr 22 j 14:55	0°♎	
direct	-3115 Mar 24 j 02:33	19°♎11'37		evening set	-3110 May 21 j 03:02	18°♎01'40	
	-3115 May 07 j 20:49	0°♎			-3110 Jun 08 j 23:48	0°♎	
desc. node	-3115 Jun 24 j 19:59	25°♎50'44		max. Earth dist.	-3110 Jun 27 j 03:42	11°♎35'14	2.66418 AU
	-3115 Jul 01 j 09:11	0°♎					
	-3115 Aug 13 j 22:56	0°♎		conjunction	-3110 Jul 06 j 16:47	17°♎42'35	1°05'53
	-3115 Sep 23 j 01:10	0°♎		minimum elong	-3110 Jul 06 j 15:55	17°♎41'11	1°06'00
	-3115 Oct 31 j 22:37	0°♎			-3110 Jul 25 j 17:30	0°♎	
	-3115 Dec 10 j 00:00	0°♎		morning rise	-3110 Aug 20 j 19:07	17°♎03'04	
	-3114 Jan 19 j 04:26	0°♎			-3110 Sep 09 j 07:21	0°♎	
evening set	-3114 Feb 24 j 02:06	25°♎46'05			-3110 Oct 23 j 12:29	0°♎	
	-3114 Mar 02 j 02:58	0°♎			-3110 Dec 05 j 11:31	0°♎	
	-3114 Apr 15 j 00:48	0°♎			-3109 Jan 16 j 11:49	0°♎	
				desc. node	-3109 Feb 14 j 21:03	21°♎09'26	
conjunction	-3114 Apr 19 j 13:20	3°♎01'04	0°-8'-13		-3109 Feb 27 j 04:52	0°♎	
minimum elong	-3114 Apr 19 j 13:43	3°♎01'43	0°08'14		-3109 Apr 11 j 01:56	0°♎	
behind sun begin	-3114 Apr 18 j 18:58	2°♎30'30			-3109 May 30 j 04:58	0°♎	
behind sun end	-3114 Apr 20 j 08:29	3°♎32'55		retrograde	-3109 Jul 21 j 10:02	15°♎47'02	
asc. node	-3114 May 03 j 16:28	12°♎22'16		min. Earth dist.	-3109 Aug 18 j 12:14	10°♎25'21	0.46038 AU
max. Earth dist.	-3114 May 10 j 09:43	16°♎46'56	2.61390 AU	greatest brilliancy	-3109 Aug 24 j 18:07	8°♎15'52	-2.3m
	-3114 May 30 j 17:42	0°♎		opposition	-3109 Aug 26 j 15:39	7°♎36'16	-5°-17'-34
morning rise	-3114 Jun 08 j 19:35	5°♎50'48		direct	-3109 Sep 28 j 06:42	0°♎58'08	
	-3114 Jul 16 j 19:17	0°♎			-3109 Dec 20 j 19:19	0°♎	
	-3114 Sep 02 j 23:03	0°♎		asc. node	-3109 Dec 24 j 10:41	1°♎56'41	
	-3114 Oct 22 j 17:09	0°♎			-3108 Feb 11 j 20:21	0°♎	
	-3114 Dec 16 j 02:56	0°♎			-3108 Apr 01 j 20:31	0°♎	
retrograde	-3113 Feb 28 j 14:41	23°♎23'21			-3108 May 20 j 10:03	0°♎	
opposition	-3113 Apr 02 j 23:36	17°♎00'06	2°21'58	evening set	-3108 Jun 27 j 06:56	24°♎03'56	
greatest brilliancy	-3113 Apr 04 j 03:38	16°♎37'10	-2.3m		-3108 Jul 06 j 10:53	0°♎	
min. Earth dist.	-3113 Apr 11 j 06:48	14°♎18'24	0.45677 AU	max. Earth dist.	-3108 Jul 21 j 14:38	9°♎55'07	2.60898 AU
direct	-3113 May 09 j 10:31	9°♎14'20					

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

conjunction	-3108 Aug 13 j 05:12	24°58'52	1°08'04			-3103 Jul 18 j 15:09	0°8	
minimum elong	-3108 Aug 13 j 05:56	25°00'06	1°08'09	asc. node		-3103 Aug 15 j 10:50	16°800'08	
	-3108 Aug 20 j 15:23	0°9				-3103 Sep 11 j 20:00	0°II	
morning rise	-3108 Sep 29 j 17:35	27°046'34		retrograde		-3103 Nov 13 j 03:59	17°II36'06	
	-3108 Oct 02 j 20:57	0°7		opposition		-3103 Dec 22 j 18:21	8°II09'44	4°01'18
	-3108 Nov 13 j 08:23	0°5		greatest brilliancy		-3103 Dec 22 j 23:30	8°II04'36	-1.3m
	-3108 Dec 23 j 11:43	0°7		min. Earth dist.		-3103 Dec 24 j 09:39	7°II30'37	0.67015 AU
desc. node	-3107 Jan 01 j 19:49	7°704'41				-3102 Jan 16 j 03:52	30°8	
	-3107 Jan 31 j 21:43	0°8		direct		-3102 Feb 01 j 18:57	28°812'19	
	-3107 Mar 12 j 10:41	0°3				-3102 Feb 19 j 11:18	0°II	
	-3107 Apr 22 j 08:12	0°≈				-3102 May 03 j 05:14	0°5	
	-3107 Jun 05 j 22:12	0°7				-3102 Jun 21 j 20:32	0°9	
	-3107 Aug 03 j 13:41	0°7				-3102 Aug 04 j 19:44	0°7	
retrograde	-3107 Sep 03 j 19:27	5°754'54		desc. node		-3102 Aug 24 j 13:46	14°718'25	
	-3107 Oct 03 j 02:04	30°87				-3102 Sep 14 j 14:11	0°5	
min. Earth dist.	-3107 Oct 07 j 06:49	28°724'26	0.58163 AU			-3102 Oct 23 j 11:43	0°7	
opposition	-3107 Oct 13 j 02:20	26°707'04	-1°-12'-50	evening set		-3102 Nov 28 j 18:05	28°731'55	
greatest brilliancy	-3107 Oct 12 j 17:39	26°715'38	-1.7m			-3102 Nov 30 j 14:48	0°8	
asc. node	-3107 Nov 10 j 11:11	18°708'10				-3101 Jan 07 j 23:27	0°3	
direct	-3107 Nov 18 j 20:18	17°740'10						
	-3106 Jan 08 j 13:37	0°7		conjunction		-3101 Feb 02 j 13:18	19°334'38	-1°-6'-19
	-3106 Mar 09 j 23:17	0°8		minimum elong		-3101 Feb 02 j 14:14	19°336'23	1°06'25
	-3106 Apr 30 j 14:39	0°II				-3101 Feb 16 j 10:28	0°≈	
	-3106 Jun 17 j 17:39	0°5		max. Earth dist.		-3101 Mar 22 j 09:21	24°≈48'27	2.45862 AU
	-3106 Aug 02 j 02:04	0°9				-3101 Mar 29 j 16:15	0°7	
evening set	-3106 Aug 07 j 03:50	3°928'03		morning rise		-3101 Apr 06 j 17:37	5°741'05	
max. Earth dist.	-3106 Aug 22 j 17:16	14°914'32	2.50626 AU			-3101 May 12 j 03:10	0°7	
	-3106 Sep 13 j 22:30	0°7				-3101 Jun 27 j 01:05	0°8	
				asc. node		-3101 Jul 03 j 10:19	4°802'12	
conjunction	-3106 Sep 26 j 23:19	9°726'33	0°34'57			-3101 Aug 14 j 22:50	0°II	
minimum elong	-3106 Sep 27 j 00:57	9°729'32	0°34'59			-3101 Oct 08 j 18:26	0°5	
	-3106 Oct 24 j 17:03	0°5		retrograde		-3101 Dec 20 j 19:30	22°517'17	
desc. node	-3106 Nov 19 j 17:56	19°547'11		opposition		-3100 Jan 27 j 20:01	13°541'49	4°58'03
morning rise	-3106 Nov 21 j 10:46	21°505'34		greatest brilliancy		-3100 Jan 29 j 00:18	13°514'35	-1.5m
	-3106 Dec 03 j 00:02	0°7		min. Earth dist.		-3100 Feb 02 j 06:54	11°535'57	0.61903 AU
	-3105 Jan 10 j 13:17	0°8		direct		-3100 Mar 08 j 21:09	3°546'30	
	-3105 Feb 18 j 05:03	0°3				-3100 May 24 j 19:07	0°9	
	-3105 Mar 29 j 21:24	0°≈		desc. node		-3100 Jul 11 j 12:38	29°940'55	
	-3105 May 10 j 16:13	0°7				-3100 Jul 11 j 23:54	0°7	
	-3105 Jun 25 j 05:10	0°7				-3100 Aug 23 j 03:08	0°5	
	-3105 Aug 19 j 01:29	0°8				-3100 Oct 01 j 14:57	0°7	
asc. node	-3105 Sep 28 j 11:41	12°853'37				-3100 Nov 09 j 03:19	0°8	
retrograde	-3105 Oct 10 j 11:23	13°847'18				-3100 Dec 17 j 21:03	0°3	
min. Earth dist.	-3105 Nov 17 j 08:44	4°845'36	0.65677 AU			-3099 Jan 26 j 18:09	0°≈	
opposition	-3105 Nov 19 j 12:51	3°853'08	1°56'28	evening set		-3099 Feb 02 j 07:23	4°≈48'49	
greatest brilliancy	-3105 Nov 19 j 06:39	3°859'23	-1.3m			-3099 Mar 09 j 09:46	0°7	
	-3105 Nov 29 j 13:59	30°87						
direct	-3105 Dec 29 j 01:13	24°725'48		conjunction		-3099 Apr 01 j 00:17	15°741'52	0°-28'-18
	-3104 Jan 30 j 17:28	0°8		minimum elong		-3099 Apr 01 j 01:44	15°744'20	0°28'20
	-3104 Apr 06 j 06:34	0°II				-3099 Apr 22 j 02:20	0°7	
	-3104 May 27 j 13:43	0°5		max. Earth dist.		-3099 Apr 29 j 04:51	4°745'09	2.57898 AU
	-3104 Jul 12 j 21:25	0°9		asc. node		-3099 May 20 j 08:54	18°743'37	
	-3104 Aug 24 j 20:57	0°7		morning rise		-3099 May 23 j 23:30	21°705'02	
evening set	-3104 Sep 24 j 19:24	22°746'02				-3099 Jun 06 j 17:27	0°8	
	-3104 Oct 04 j 09:35	0°5				-3099 Jul 24 j 00:41	0°II	
desc. node	-3104 Oct 06 j 16:10	1°543'33				-3099 Sep 11 j 01:39	0°5	
max. Earth dist.	-3104 Oct 27 j 03:31	17°525'57	2.38618 AU			-3099 Nov 02 j 10:40	0°9	
	-3104 Nov 12 j 07:17	0°7				-3098 Jan 10 j 16:20	0°7	
				retrograde		-3098 Feb 05 j 02:44	3°732'08	
conjunction	-3104 Nov 23 j 18:41	8°759'28	0°-32'-43			-3098 Feb 28 j 21:25	30°89	
minimum elong	-3104 Nov 23 j 16:12	8°754'35	0°32'46	opposition		-3098 Mar 12 j 02:17	26°921'59	3°54'04
	-3104 Dec 20 j 11:21	0°8		greatest brilliancy		-3098 Mar 13 j 19:14	25°945'54	-2.0m
	-3103 Jan 27 j 19:32	0°3		min. Earth dist.		-3098 Mar 20 j 10:11	23°926'41	0.50894 AU
morning rise	-3103 Jan 30 j 10:10	2°301'13		direct		-3098 Apr 19 j 16:17	17°934'52	
	-3103 Mar 08 j 04:35	0°≈		desc. node		-3098 May 29 j 13:04	26°950'57	
	-3103 Apr 18 j 09:34	0°7				-3098 Jun 05 j 15:53	0°7	
	-3103 Jun 01 j 04:21	0°7				-3098 Jul 27 j 01:13	0°5	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 31

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3098 Sep 07 j 10:31	0°♌				-3093 Aug 28 j 14:26	0°♏	
	-3098 Oct 17 j 12:40	0°♍		morning rise		-3093 Sep 13 j 22:14	11°♏06'29	
	-3098 Nov 26 j 10:50	0°♎				-3093 Oct 11 j 03:31	0°♐	
	-3097 Jan 06 j 08:36	0°♏				-3093 Nov 22 j 01:57	0°♑	
	-3097 Feb 17 j 21:32	0°♐				-3092 Jan 01 j 18:27	0°♌	
evening set	-3097 Mar 26 j 01:42	24°♐32'55		desc. node		-3092 Jan 19 j 13:07	13°♌18'03	
	-3097 Apr 03 j 06:15	0°♑				-3092 Feb 10 j 18:42	0°♍	
asc. node	-3097 Apr 07 j 05:45	2°♑38'11				-3092 Mar 22 j 00:54	0°♎	
						-3092 May 03 j 04:22	0°♏	
conjunction	-3097 May 15 j 17:16	27°♑45'56	0°21'38			-3092 Jun 20 j 17:15	0°♐	
minimum elong	-3097 May 15 j 16:26	27°♑44'34	0°21'40	retrograde		-3092 Aug 18 j 17:56	18°♐42'59	
	-3097 May 19 j 04:24	0°♑		min. Earth dist.		-3092 Sep 19 j 03:40	11°♐58'52	0.53786 AU
max. Earth dist.	-3097 May 26 j 07:46	4°♑35'49	2.65215 AU	greatest brilliancy		-3092 Sep 25 j 06:39	9°♐38'31	-1.9m
morning rise	-3097 Jul 02 j 00:27	28°♑02'46		opposition		-3092 Sep 26 j 05:18	9°♐16'48	-2°-44'-37
	-3097 Jul 05 j 02:12	0°♒		direct		-3092 Oct 31 j 13:01	1°♐25'19	
	-3097 Aug 21 j 10:06	0°♓		asc. node		-3092 Nov 27 j 02:18	5°♐25'28	
	-3097 Oct 07 j 23:17	0°♑				-3091 Jan 24 j 02:08	0°♑	
	-3097 Nov 25 j 06:02	0°♒				-3091 Mar 19 j 04:55	0°♑	
	-3096 Jan 15 j 06:43	0°♓				-3091 May 08 j 06:22	0°♒	
	-3096 Mar 24 j 10:52	0°♌				-3091 Jun 24 j 20:23	0°♓	
retrograde	-3096 Apr 13 j 15:10	2°♌23'15		evening set		-3091 Jul 21 j 14:58	17°♓34'05	
desc. node	-3096 Apr 15 j 12:45	2°♌21'52		max. Earth dist.		-3091 Aug 08 j 20:34	29°♓50'43	2.55137 AU
	-3096 May 03 j 11:27	30°♒♑				-3091 Aug 09 j 02:02	0°♑	
opposition	-3096 May 14 j 08:44	27°♑11'45	-2°-2'-38					
greatest brilliancy	-3096 May 14 j 19:09	27°♑04'30	-2.8m	conjunction		-3091 Sep 08 j 09:03	20°♑59'37	0°52'35
min. Earth dist.	-3096 May 18 j 19:11	25°♑57'47	0.39036 AU	minimum elong		-3091 Sep 08 j 10:41	21°♑02'29	0°52'38
direct	-3096 Jun 15 j 10:40	21°♑27'50				-3091 Sep 21 j 01:14	0°♒	
	-3096 Jul 22 j 20:58	0°♌		morning rise		-3091 Oct 29 j 20:39	28°♒21'44	
	-3096 Sep 15 j 07:31	0°♍				-3091 Nov 01 j 01:22	0°♓	
	-3096 Oct 30 j 11:07	0°♎		desc. node		-3091 Dec 06 j 11:19	26°♓48'43	
	-3096 Dec 13 j 11:44	0°♏				-3091 Dec 10 j 15:04	0°♌	
	-3095 Jan 27 j 03:12	0°♐				-3090 Jan 18 j 10:40	0°♍	
asc. node	-3095 Feb 22 j 03:41	17°♐08'33				-3090 Feb 26 j 08:06	0°♎	
	-3095 Mar 13 j 22:03	0°♑				-3090 Apr 07 j 07:09	0°♏	
	-3095 Apr 29 j 16:17	0°♑				-3090 May 19 j 15:29	0°♐	
evening set	-3095 May 06 j 01:34	4°♑04'07				-3090 Jul 06 j 00:48	0°♑	
	-3095 Jun 15 j 19:27	0°♒				-3090 Sep 23 j 17:00	0°♑	
max. Earth dist.	-3095 Jun 17 j 23:02	1°♒22'11	2.67137 AU	retrograde		-3090 Sep 26 j 18:32	0°♑03'44	
						-3090 Sep 29 j 19:11	30°♒♑	
conjunction	-3095 Jun 22 j 06:01	4°♒06'22	0°57'40	asc. node		-3090 Oct 15 j 02:13	27°♑43'12	
minimum elong	-3095 Jun 22 j 04:49	4°♒04'27	0°57'45	min. Earth dist.		-3090 Nov 02 j 01:36	21°♑33'43	0.63443 AU
	-3095 Aug 01 j 14:20	0°♓		opposition		-3090 Nov 05 j 16:50	20°♑06'07	0°51'18
morning rise	-3095 Aug 06 j 09:14	3°♓05'57		greatest brilliancy		-3090 Nov 05 j 12:21	20°♑10'37	-1.5m
	-3095 Sep 16 j 12:13	0°♑		direct		-3090 Dec 14 j 06:39	10°♑58'08	
	-3095 Oct 31 j 09:18	0°♒				-3089 Feb 18 j 21:07	0°♑	
	-3095 Dec 14 j 09:07	0°♓				-3089 Apr 16 j 18:28	0°♒	
	-3094 Jan 26 j 21:31	0°♌				-3089 Jun 05 j 09:57	0°♓	
desc. node	-3094 Mar 03 j 12:51	24°♌21'22				-3089 Jul 21 j 05:44	0°♑	
	-3094 Mar 11 j 23:13	0°♍				-3089 Sep 02 j 02:54	0°♒	
	-3094 Apr 29 j 07:12	0°♎		evening set		-3089 Sep 04 j 22:02	2°♒01'13	
retrograde	-3094 Jun 28 j 19:20	20°♓05'49		max. Earth dist.		-3089 Sep 22 j 14:15	14°♒57'05	2.42965 AU
min. Earth dist.	-3094 Jul 25 j 14:14	15°♓27'10	0.41382 AU			-3089 Oct 12 j 17:00	0°♓	
greatest brilliancy	-3094 Jul 30 j 18:39	13°♓50'34	-2.6m	desc. node		-3089 Oct 24 j 08:55	8°♓52'05	
opposition	-3094 Aug 01 j 17:29	13°♓13'54	-6°-28'-45					
direct	-3094 Sep 01 j 13:52	7°♓30'06		conjunction		-3089 Oct 30 j 17:04	13°♓43'41	0°-4'-28
	-3094 Nov 10 j 05:19	0°♏		minimum elong		-3089 Oct 30 j 16:45	13°♓43'05	0°04'29
	-3093 Jan 02 j 08:35	0°♐		behind sun begin		-3089 Oct 29 j 16:22	12°♓56'14	
asc. node	-3093 Jan 10 j 02:52	4°♐38'19		behind sun end		-3089 Oct 31 j 17:09	14°♓29'57	
	-3093 Feb 20 j 20:20	0°♑				-3089 Nov 20 j 17:35	0°♌	
	-3093 Apr 10 j 11:34	0°♑				-3089 Dec 29 j 00:23	0°♍	
	-3093 May 28 j 10:55	0°♒		morning rise		-3088 Jan 02 j 05:22	3°♍18'13	
evening set	-3093 Jun 13 j 09:41	10°♒06'45				-3088 Feb 05 j 10:25	0°♎	
max. Earth dist.	-3093 Jul 12 j 09:18	28°♒44'50	2.63671 AU			-3088 Mar 15 j 20:46	0°♏	
	-3093 Jul 14 j 07:33	0°♓				-3088 Apr 26 j 04:06	0°♐	
						-3088 Jun 09 j 07:51	0°♑	
conjunction	-3093 Jul 29 j 20:28	10°♓09'59	1°10'51			-3088 Jul 28 j 04:40	0°♑	
minimum elong	-3093 Jul 29 j 20:29	10°♓10'02	1°10'57	asc. node		-3088 Sep 01 j 02:15	18°♑13'57	

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3088 Oct 01 j 04:42	0°II				-3083 Sep 17 j 08:50	0°ML	
retrograde	-3088 Oct 30 j 14:48	4°II47'17				-3083 Oct 26 j 14:04	0°Z	
	-3088 Nov 26 j 15:30	30°R8				-3083 Dec 04 j 21:03	0°Z	
opposition	-3088 Dec 09 j 12:27	25°807'11	3°20'15			-3082 Jan 14 j 06:08	0°≈	
greatest brilliancy	-3088 Dec 09 j 11:04	25°808'35	-1.3m			-3082 Feb 25 j 08:15	0°H	
min. Earth dist.	-3088 Dec 09 j 15:30	25°804'09	0.67270 AU	evening set		-3082 Mar 07 j 10:57	7°H00'30	
direct	-3087 Jan 19 j 02:34	15°818'16				-3082 Apr 10 j 08:40	0°Y	
	-3087 Mar 16 j 21:28	0°II		asc. node		-3082 Apr 23 j 22:28	9°Y00'46	
	-3087 May 13 j 07:21	0°S						
	-3087 Jun 30 j 03:45	0°Q		conjunction		-3082 Apr 29 j 10:00	12°Y37'22	0°03'13
	-3087 Aug 12 j 14:34	0°M		minimum elong		-3082 Apr 29 j 09:50	12°Y37'05	0°03'14
desc. node	-3087 Sep 10 j 08:04	21°M03'11		behind sun begin		-3082 Apr 28 j 13:04	12°Y02'59	
	-3087 Sep 22 j 05:13	0°A		behind sun end		-3082 Apr 30 j 06:35	13°Y11'10	
	-3087 Oct 31 j 01:43	0°ML		max. Earth dist.		-3082 May 16 j 10:12	23°Y44'15	2.62965 AU
evening set	-3087 Nov 01 j 17:04	1°ML17'04				-3082 May 26 j 02:09	0°8	
	-3087 Dec 08 j 04:03	0°Z		morning rise		-3082 Jun 17 j 11:14	14°822'21	
						-3082 Jul 12 j 01:18	0°II	
conjunction	-3086 Jan 06 j 05:17	22°Z48'27	-1°-3'-54			-3082 Aug 28 j 20:12	0°S	
minimum elong	-3086 Jan 06 j 03:24	22°Z44'46	1°04'01			-3082 Oct 16 j 14:34	0°Q	
	-3086 Jan 15 j 11:17	0°Z				-3082 Dec 06 j 22:41	0°M	
	-3086 Feb 23 j 20:17	0°≈				-3081 Feb 08 j 14:55	0°A	
max. Earth dist.	-3086 Feb 23 j 13:27	29°Z47'16	2.40671 AU	retrograde		-3081 Mar 15 j 14:55	6°A30'28	
morning rise	-3086 Mar 14 j 09:08	13°≈41'54		opposition		-3081 Apr 16 j 23:58	0°A35'30	1°02'55
	-3086 Apr 06 j 00:06	0°H		greatest brilliancy		-3081 Apr 17 j 12:37	0°A25'45	-2.5m
	-3086 May 19 j 11:29	0°Y				-3081 Apr 18 j 21:55	30°RM	
	-3086 Jul 04 j 17:36	0°8		min. Earth dist.		-3081 Apr 24 j 15:45	28°M14'34	0.42938 AU
asc. node	-3086 Jul 20 j 01:05	9°827'51		desc. node		-3081 May 03 j 05:09	25°M54'22	
	-3086 Aug 24 j 00:02	0°II		direct		-3081 May 21 j 23:39	23°M32'29	
	-3086 Oct 25 j 02:18	0°S				-3081 Jun 23 j 01:29	0°A	
retrograde	-3086 Dec 05 j 12:04	8°S35'33				-3081 Aug 17 j 15:59	0°ML	
	-3085 Jan 12 j 07:24	30°RII				-3081 Sep 30 j 10:27	0°Z	
opposition	-3085 Jan 13 j 06:53	29°II37'05	4°45'35			-3081 Nov 11 j 08:54	0°Z	
greatest brilliancy	-3085 Jan 14 j 01:31	29°II18'51	-1.3m			-3081 Dec 23 j 16:08	0°≈	
min. Earth dist.	-3085 Jan 17 j 06:03	28°II03'58	0.64682 AU			-3080 Feb 05 j 05:30	0°H	
direct	-3085 Feb 23 j 12:50	19°II36'03		asc. node		-3080 Mar 10 j 19:59	23°H06'47	
	-3085 Apr 09 j 20:21	0°S				-3080 Mar 21 j 07:29	0°Y	
	-3085 Jun 06 j 11:06	0°Q		evening set		-3080 Apr 20 j 10:13	19°Y33'55	
	-3085 Jul 22 j 05:33	0°M				-3080 May 06 j 15:38	0°8	
desc. node	-3085 Jul 29 j 06:43	4°M56'47						
	-3085 Sep 01 j 14:56	0°A		conjunction		-3080 Jun 07 j 14:50	20°825'46	0°46'00
	-3085 Oct 10 j 18:51	0°ML		minimum elong		-3080 Jun 07 j 13:33	20°823'42	0°46'03
	-3085 Nov 18 j 01:48	0°Z		max. Earth dist.		-3080 Jun 08 j 23:14	21°817'24	2.67023 AU
	-3085 Dec 26 j 14:14	0°Z				-3080 Jun 22 j 15:05	0°II	
evening set	-3084 Jan 09 j 21:35	10°Z57'18		morning rise		-3080 Jul 23 j 06:03	19°II33'23	
	-3084 Feb 04 j 05:42	0°≈				-3080 Aug 08 j 12:59	0°S	
						-3080 Sep 23 j 22:17	0°Q	
conjunction	-3084 Mar 11 j 08:03	26°≈13'43	0°-47'-16			-3080 Nov 08 j 17:54	0°M	
minimum elong	-3084 Mar 11 j 10:19	26°≈17'45	0°47'19			-3080 Dec 24 j 07:59	0°A	
	-3084 Mar 16 j 15:42	0°H				-3079 Feb 08 j 14:52	0°ML	
max. Earth dist.	-3084 Apr 16 j 15:23	21°H30'40	2.53627 AU	desc. node		-3079 Mar 20 j 05:54	24°ML03'24	
	-3084 Apr 29 j 04:13	0°Y				-3079 Mar 31 j 00:38	0°Z	
morning rise	-3084 May 06 j 19:31	5°Y07'04		retrograde		-3079 Jun 01 j 22:35	20°Z22'29	
asc. node	-3084 Jun 05 j 23:46	24°Y57'15		min. Earth dist.		-3079 Jun 29 j 12:22	15°Z52'32	0.38221 AU
	-3084 Jun 13 j 19:23	0°8		greatest brilliancy		-3079 Jul 02 j 05:38	15°Z07'46	-2.8m
	-3084 Jul 31 j 12:06	0°II		opposition		-3079 Jul 03 j 06:26	14°Z50'40	-6°-17'-10
	-3084 Sep 19 j 21:28	0°S		direct		-3079 Aug 02 j 02:00	9°Z48'12	
	-3084 Nov 16 j 09:18	0°Q				-3079 Oct 04 j 18:44	0°Z	
retrograde	-3083 Jan 15 j 23:23	16°Q23'20				-3079 Nov 25 j 15:48	0°≈	
opposition	-3083 Feb 21 j 08:05	8°Q34'24	4°40'41			-3078 Jan 12 j 14:14	0°H	
greatest brilliancy	-3083 Feb 23 j 00:23	7°Q57'11	-1.7m	asc. node		-3078 Jan 26 j 18:08	8°H56'46	
min. Earth dist.	-3083 Feb 28 j 19:22	5°Q49'19	0.55783 AU			-3078 Mar 01 j 02:53	0°Y	
	-3083 Mar 22 j 02:17	30°RS				-3078 Apr 17 j 19:49	0°8	
direct	-3083 Apr 02 j 07:04	29°S08'28		evening set		-3078 May 29 j 14:58	26°820'52	
	-3083 Apr 13 j 19:35	0°Q				-3078 Jun 04 j 09:12	0°II	
desc. node	-3083 Jun 15 j 05:07	25°Q04'43		max. Earth dist.		-3078 Jul 02 j 14:11	18°II00'26	2.65655 AU
	-3083 Jun 23 j 12:57	0°M						
	-3083 Aug 07 j 16:23	0°A		conjunction		-3078 Jul 15 j 01:04	26°II02'17	1°08'56

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 33

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

minimum elong	-3078 Jul 15 j 00:29	26° Π 01'20	1°09'02	retrograde	-3073 Oct 18 j 06:00	21° 8 51'16	
	-3078 Jul 21 j 03:44	0° 5		min. Earth dist.	-3073 Nov 25 j 22:11	12° 8 33'51	0.66519 AU
morning rise	-3078 Aug 29 j 08:11	25° 5 47'56		opposition	-3073 Nov 27 j 06:57	12° 8 00'52	2°30'07
	-3078 Sep 04 j 14:49	0° Ω		greatest brilliancy	-3073 Nov 27 j 01:31	12° 8 06'21	-1.3m
	-3078 Oct 18 j 13:45	0° 7		direct	-3072 Jan 06 j 05:31	2° 8 24'43	
	-3078 Nov 30 j 02:47	0° 1			-3072 Mar 30 j 05:59	0° II	
	-3077 Jan 10 j 13:47	0° M			-3072 May 22 j 03:28	0° 5	
desc. node	-3077 Feb 05 j 05:19	18° M 47'17			-3072 Jul 07 j 22:46	0° Ω	
	-3077 Feb 20 j 12:23	0° 7			-3072 Aug 20 j 02:29	0° 7	
	-3077 Apr 03 j 02:06	0° 3		desc. node	-3072 Sep 27 j 01:16	28° 7 01'10	
	-3077 May 18 j 02:42	0° \approx			-3072 Sep 29 j 16:04	0° 1	
retrograde	-3077 Aug 01 j 18:31	28° \approx 53'14		evening set	-3072 Oct 07 j 17:38	6° 1 08'16	
min. Earth dist.	-3077 Aug 30 j 23:35	23° \approx 01'38	0.48855 AU		-3072 Nov 07 j 13:33	0° M	
greatest brilliancy	-3077 Sep 06 j 08:32	20° \approx 43'33	-2.2m				
opposition	-3077 Sep 07 j 22:43	20° \approx 08'49	-4°-23'-20	conjunction	-3072 Dec 09 j 00:58	24° M 44'44	0°-47'-3
direct	-3077 Oct 11 j 14:48	13° \approx 01'57		minimum elong	-3072 Dec 08 j 21:49	24° M 38'32	0°47'07
	-3077 Dec 10 j 14:09	0° H		max. Earth dist.	-3072 Dec 11 j 13:24	26° M 43'48	2.37500 AU
asc. node	-3077 Dec 14 j 17:44	1° H 56'54			-3072 Dec 15 j 16:58	0° 7	
	-3076 Feb 05 j 11:38	0° Y			-3071 Jan 23 j 00:21	0° 3	
	-3076 Mar 27 j 14:28	0° 8		morning rise	-3071 Feb 15 j 14:02	18° 3 06'22	
	-3076 May 15 j 15:06	0° II			-3071 Mar 03 j 08:36	0° \approx	
	-3076 Jul 01 j 20:30	0° 5			-3071 Apr 13 j 11:51	0° H	
evening set	-3076 Jul 05 j 22:36	2° 5 39'24			-3071 May 27 j 01:49	0° Y	
max. Earth dist.	-3076 Jul 27 j 21:36	17° 5 06'42	2.59051 AU		-3071 Jul 12 j 21:57	0° 8	
	-3076 Aug 16 j 01:36	0° Ω		asc. node	-3071 Aug 05 j 16:53	14° 8 10'04	
					-3071 Sep 03 j 13:29	0° II	
conjunction	-3076 Aug 22 j 08:30	4° Ω 17'05	1°04'04	retrograde	-3071 Nov 21 j 03:26	25° II 27'30	
minimum elong	-3076 Aug 22 j 09:37	4° Ω 18'59	1°04'10	opposition	-3071 Dec 30 j 11:41	16° II 10'01	4°20'38
	-3076 Sep 28 j 05:10	0° 7		greatest brilliancy	-3071 Dec 30 j 21:16	16° II 00'32	-1.3m
morning rise	-3076 Oct 10 j 00:18	8° 7 26'47		min. Earth dist.	-3070 Jan 01 j 22:40	15° II 11'34	0.66462 AU
	-3076 Nov 08 j 12:23	0° 1		direct	-3070 Feb 09 j 15:35	6° II 09'47	
	-3076 Dec 18 j 10:22	0° M			-3070 Apr 25 j 15:35	0° 5	
desc. node	-3076 Dec 23 j 05:21	3° M 39'03			-3070 Jun 16 j 03:46	0° Ω	
	-3075 Jan 26 j 14:15	0° 7			-3070 Jul 30 j 16:02	0° 7	
	-3075 Mar 06 j 19:58	0° 3		desc. node	-3070 Aug 14 j 23:28	10° 7 58'56	
	-3075 Apr 16 j 06:24	0° \approx			-3070 Sep 09 j 15:11	0° 1	
	-3075 May 29 j 16:27	0° H			-3070 Oct 18 j 14:41	0° M	
	-3075 Jul 20 j 08:49	0° Y		greatest brilliancy	-3070 Oct 31 j 03:24	9° M 49'13	1.2m
retrograde	-3075 Sep 12 j 10:45	15° Y 21'59			-3070 Nov 25 j 18:43	0° 7	
min. Earth dist.	-3075 Oct 16 j 23:43	7° Y 28'28	0.60298 AU	evening set	-3070 Dec 14 j 06:42	14° 7 31'29	
opposition	-3075 Oct 22 j 00:58	5° Y 27'49	0°-24'-13		-3069 Jan 03 j 03:59	0° 3	
greatest brilliancy	-3075 Oct 21 j 22:23	5° Y 30'24	-1.6m		-3069 Feb 11 j 15:48	0° \approx	
asc. node	-3075 Oct 31 j 17:24	1° Y 47'58					
	-3075 Nov 06 j 08:38	30° R H		conjunction	-3069 Feb 16 j 23:54	3° \approx 57'45	-1°-1'-50
direct	-3075 Nov 28 j 11:34	26° H 44'31		minimum elong	-3069 Feb 17 j 01:52	4° \approx 01'23	1°01'55
	-3075 Dec 22 j 15:31	0° Y			-3069 Mar 24 j 22:06	0° H	
	-3074 Mar 03 j 05:44	0° 8		max. Earth dist.	-3069 Apr 02 j 04:50	5° H 50'36	2.48755 AU
	-3074 Apr 25 j 07:03	0° II		morning rise	-3069 Apr 18 j 16:21	17° H 17'47	
	-3074 Jun 12 j 21:46	0° 5			-3069 May 07 j 08:19	0° Y	
	-3074 Jul 28 j 10:19	0° Ω			-3069 Jun 22 j 02:01	0° 8	
evening set	-3074 Aug 17 j 02:12	13° Ω 32'33		asc. node	-3069 Jun 23 j 16:29	1° 8 01'26	
max. Earth dist.	-3074 Sep 01 j 05:57	24° Ω 13'36	2.47968 AU		-3069 Aug 09 j 09:44	0° II	
	-3074 Sep 09 j 07:36	0° 7			-3069 Oct 01 j 00:28	0° 5	
					-3069 Dec 17 j 01:53	0° Ω	
conjunction	-3074 Oct 08 j 09:26	21° 7 16'55	0°22'09	retrograde	-3069 Dec 30 j 04:41	0° Ω 59'40	
minimum elong	-3074 Oct 08 j 10:41	21° 7 19'14	0°22'09		-3068 Jan 11 j 16:33	30° R 5	
	-3074 Oct 20 j 00:54	0° 1		opposition	-3068 Feb 05 j 16:19	22° 5 39'01	4°57'32
desc. node	-3074 Nov 10 j 03:43	16° 1 03'04		greatest brilliancy	-3068 Feb 07 j 01:33	22° 5 07'23	-1.5m
	-3074 Nov 28 j 05:45	0° M		min. Earth dist.	-3068 Feb 11 j 21:14	20° 5 17'29	0.59975 AU
morning rise	-3074 Dec 05 j 13:44	5° M 41'46		direct	-3068 Mar 17 j 10:47	12° 5 50'44	
	-3073 Jan 05 j 16:25	0° 7			-3068 May 15 j 10:25	0° Ω	
	-3073 Feb 13 j 05:16	0° 3		desc. node	-3068 Jul 01 j 22:36	27° Ω 37'08	
	-3073 Mar 24 j 18:07	0° \approx			-3068 Jul 05 j 13:57	0° 7	
	-3073 May 05 j 06:24	0° H			-3068 Aug 17 j 11:52	0° 1	
	-3073 Jun 19 j 02:05	0° Y			-3068 Sep 26 j 07:45	0° M	
	-3073 Aug 09 j 16:09	0° 8			-3068 Nov 04 j 00:45	0° 7	
asc. node	-3073 Sep 18 j 16:39	16° 8 56'18			-3068 Dec 12 j 21:45	0° 3	

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3067 Jan 21 j 21:42	0°≈			-3063 Dec 08 j 15:53	0°♎		
evening set	-3067 Feb 14 j 22:46	17°≈26'58			-3062 Jan 20 j 06:32	0°♌		
	-3067 Mar 04 j 15:41	0°♐		desc. node	-3062 Feb 21 j 23:34	23°♌06'43		
					-3062 Mar 03 j 19:21	0°♏		
conjunction	-3067 Apr 11 j 19:04	26°♐13'33	0°-16'-43		-3062 Apr 17 j 05:39	0°♑		
minimum elong	-3067 Apr 11 j 19:54	26°♐14'57	0°16'43		-3062 Jun 13 j 00:21	0°≈		
	-3067 Apr 17 j 09:49	0°♑		retrograde	-3062 Jul 12 j 02:53	5°≈33'51		
max. Earth dist.	-3067 May 05 j 19:18	12°♑14'01	2.59922 AU	min. Earth dist.	-3062 Aug 08 j 09:50	0°≈34'25	0.43837 AU	
asc. node	-3067 May 10 j 14:17	15°♑23'15			-3062 Aug 10 j 04:09	30°♑♑		
morning rise	-3067 Jun 02 j 04:14	0°♒05'46		greatest brilliancy	-3062 Aug 14 j 08:36	28°♑36'32	-2.4m	
	-3067 Jun 02 j 00:40	0°♒		opposition	-3062 Aug 16 j 09:02	27°♑56'15	-5°-54'-20	
	-3067 Jul 19 j 03:41	0°♓		direct	-3062 Sep 17 j 04:09	21°♑42'35		
	-3067 Sep 05 j 14:56	0°♑			-3062 Oct 26 j 01:33	0°≈		
	-3067 Oct 26 j 06:48	0°♒			-3062 Dec 25 j 20:30	0°♐		
	-3067 Dec 23 j 05:28	0°♑		asc. node	-3062 Dec 31 j 08:09	3°♐06'30		
retrograde	-3066 Feb 17 j 22:10	14°♑51'32			-3061 Feb 15 j 02:10	0°♑		
opposition	-3066 Mar 24 j 01:36	8°♑06'21	3°07'45		-3061 Apr 05 j 10:40	0°♒		
greatest brilliancy	-3066 Mar 25 j 13:09	7°♑36'10	-2.2m		-3061 May 23 j 18:04	0°♓		
min. Earth dist.	-3066 Apr 01 j 13:04	5°♑14'53	0.48007 AU	evening set	-3061 Jun 21 j 21:51	18°♓30'02		
	-3066 Apr 25 j 19:17	30°♒♒			-3061 Jul 09 j 17:37	0°♑		
direct	-3066 Apr 30 j 13:31	29°♒50'29		max. Earth dist.	-3061 Jul 18 j 06:16	5°♑33'34	2.62240 AU	
	-3066 May 05 j 09:06	0°♑						
desc. node	-3066 May 19 j 21:24	2°♑15'58		conjunction	-3061 Aug 07 j 13:14	18°♑57'21	1°09'50	
	-3066 Jul 18 j 03:01	0°♎		minimum elong	-3061 Aug 07 j 13:39	18°♑58'03	1°09'56	
	-3066 Aug 31 j 12:24	0°♌			-3061 Aug 23 j 23:59	0°♒		
	-3066 Oct 11 j 11:01	0°♏		morning rise	-3061 Sep 23 j 07:35	20°♒49'10		
	-3066 Nov 20 j 21:29	0°♑			-3061 Oct 06 j 09:47	0°♑		
	-3065 Jan 01 j 04:08	0°≈			-3061 Nov 17 j 02:42	0°♎		
	-3065 Feb 12 j 23:36	0°♐			-3061 Dec 27 j 12:08	0°♌		
asc. node	-3065 Mar 28 j 12:13	29°♐19'18		desc. node	-3060 Jan 09 j 22:29	10°♌07'23		
	-3065 Mar 29 j 12:50	0°♑			-3060 Feb 05 j 04:11	0°♏		
evening set	-3065 Apr 04 j 22:56	4°♑14'08			-3060 Mar 15 j 23:16	0°♑		
	-3065 May 14 j 13:26	0°♒			-3060 Apr 26 j 06:17	0°≈		
					-3060 Jun 10 j 22:27	0°♐		
conjunction	-3065 May 24 j 14:08	6°♒26'48	0°31'19	retrograde	-3060 Aug 28 j 03:12	29°♐12'31		
minimum elong	-3065 May 24 j 13:03	6°♒25'03	0°31'21	min. Earth dist.	-3060 Sep 29 j 16:52	22°♐01'50	0.56275 AU	
max. Earth dist.	-3065 May 31 j 20:13	11°♒05'42	2.66091 AU	greatest brilliancy	-3060 Oct 05 j 12:01	19°♐46'15	-1.8m	
	-3065 Jun 30 j 11:09	0°♓		opposition	-3060 Oct 06 j 02:17	19°♐32'20	-1°-50'-33	
morning rise	-3065 Jul 10 j 03:49	6°♓10'17		direct	-3060 Nov 11 j 04:43	11°♐20'24		
	-3065 Aug 16 j 14:37	0°♑		asc. node	-3060 Nov 17 j 08:02	11°♐34'41		
	-3065 Oct 02 j 16:04	0°♒			-3059 Jan 15 j 02:27	0°♑		
	-3065 Nov 18 j 20:35	0°♑			-3059 Mar 13 j 06:26	0°♒		
	-3064 Jan 06 j 04:02	0°♎			-3059 May 03 j 05:01	0°♓		
	-3064 Feb 28 j 07:52	0°♌			-3059 Jun 20 j 03:12	0°♑		
desc. node	-3064 Apr 05 j 22:09	15°♌25'39		evening set				

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 35

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

direct	-3058 Dec 22 j 20:08	19° Υ 12'32			-3052 Mar 11 j 22:09	0° H	
	-3057 Feb 08 j 08:36	0° B					
	-3057 Apr 10 j 16:37	0° II		conjunction	-3052 Mar 23 j 09:02	8° H 01'53	0°-36'-39
	-3057 May 31 j 06:54	0° S		minimum elong	-3052 Mar 23 j 10:54	8° H 05'09	0°36'42
	-3057 Jul 16 j 10:42	0° Ω		max. Earth dist.	-3052 Apr 24 j 02:54	29° H 45'36	2.56078 AU
	-3057 Aug 28 j 10:40	0° M			-3052 Apr 24 j 11:27	0° Υ	
evening set	-3057 Sep 16 j 10:55	13° M 51'49		morning rise	-3052 May 16 j 19:13	14° Υ 51'09	
	-3057 Oct 08 j 00:55	0° A		asc. node	-3052 May 27 j 06:33	21° Υ 42'46	
max. Earth dist.	-3057 Oct 08 j 23:54	0° A 43'31	2.40399 AU		-3052 Jun 09 j 01:16	0° B	
desc. node	-3057 Oct 14 j 18:41	5° A 07'05			-3052 Jul 26 j 11:08	0° II	
					-3052 Sep 13 j 23:13	0° S	
conjunction	-3057 Nov 13 j 11:51	28° A 01'59	0°-20'-38		-3052 Nov 06 j 23:00	0° Ω	
minimum elong	-3057 Nov 13 j 10:16	27° A 58'53	0°20'39	retrograde	-3051 Jan 27 j 00:42	26° Ω 18'33	
	-3057 Nov 16 j 00:25	0° M		opposition	-3051 Mar 03 j 16:06	18° Ω 49'49	4°17'59
	-3057 Dec 24 j 05:44	0° J		greatest brilliancy	-3051 Mar 05 j 09:39	18° Ω 12'17	-1.9m
morning rise	-3056 Jan 18 j 14:40	19° J 54'08		min. Earth dist.	-3051 Mar 11 j 16:27	15° Ω 56'55	0.53158 AU
	-3056 Jan 31 j 14:07	0° Z		direct	-3051 Apr 11 j 22:21	9° Ω 42'48	
	-3056 Mar 10 j 22:39	0° \approx		desc. node	-3051 Jun 05 j 15:14	25° Ω 38'26	
	-3056 Apr 21 j 03:05	0° H			-3051 Jun 13 j 23:02	0° M	
	-3056 Jun 03 j 23:13	0° Υ			-3051 Jul 31 j 20:14	0° A	
	-3056 Jul 21 j 19:40	0° B			-3051 Sep 11 j 08:47	0° M	
asc. node	-3056 Aug 22 j 07:58	17° B 34'32			-3051 Oct 21 j 00:23	0° J	
	-3056 Sep 17 j 10:35	0° II			-3051 Nov 29 j 14:23	0° Z	
retrograde	-3056 Nov 07 j 09:49	12° II 36'14			-3050 Jan 09 j 04:59	0° \approx	
opposition	-3056 Dec 17 j 03:20	3° II 03'18	3°45'16		-3050 Feb 20 j 11:44	0° H	
greatest brilliancy	-3056 Dec 17 j 05:18	3° II 01'20	-1.2m	evening set	-3050 Mar 18 j 07:08	17° H 41'05	
min. Earth dist.	-3056 Dec 18 j 02:11	2° II 40'28	0.67251 AU		-3050 Apr 05 j 15:25	0° Υ	
	-3056 Dec 24 j 21:49	30° R B		asc. node	-3050 Apr 14 j 03:18	5° Υ 38'11	
direct	-3055 Jan 26 j 23:18	23° B 09'15					
	-3055 Mar 04 j 11:40	0° II		conjunction	-3050 May 08 j 21:34	21° Υ 52'18	0°14'08
	-3055 May 06 j 22:54	0° S		minimum elong	-3050 May 08 j 20:59	21° Υ 51'21	0°14'10
	-3055 Jun 24 j 19:59	0° Ω		behind sun begin	-3050 May 08 j 11:50	21° Υ 36'30	
	-3055 Aug 07 j 15:12	0° M		behind sun end	-3050 May 09 j 06:08	22° Υ 06'13	
desc. node	-3055 Aug 31 j 16:45	17° M 30'30			-3050 May 21 j 10:36	0° B	
	-3055 Sep 17 j 09:00	0° A		max. Earth dist.	-3050 May 22 j 05:28	0° B 30'28	2.64326 AU
	-3055 Oct 26 j 06:41	0° M		morning rise	-3050 Jun 25 j 21:26	22° B 43'10	
evening set	-3055 Nov 16 j 18:48	16° M 54'02			-3050 Jul 07 j 08:21	0° II	
	-3055 Dec 03 j 09:32	0° J			-3050 Aug 23 j 20:20	0° S	
	-3054 Jan 10 j 16:57	0° Z			-3050 Oct 10 j 20:50	0° Ω	
					-3050 Nov 29 j 05:50	0° M	
conjunction	-3054 Jan 21 j 20:24	8° Z 35'59	-1°-7'00		-3049 Jan 22 j 12:39	0° A	
minimum elong	-3054 Jan 21 j 20:11	8° Z 35'32	1°07'07	retrograde	-3049 Apr 01 j 01:22	20° A 56'24	
	-3054 Feb 19 j 02:01	0° \approx		desc. node	-3049 Apr 23 j 15:14	17° A 52'18	
max. Earth dist.	-3054 Mar 12 j 07:12	15° \approx 39'21	2.43488 AU	opposition	-3049 May 02 j 09:27	15° A 27'51	0°-36'-7
morning rise	-3054 Mar 27 j 23:44	26° \approx 58'35		greatest brilliancy	-3049 May 02 j 14:26	15° A 24'14	-2.7m
	-3054 Apr 01 j 05:33	0° H		min. Earth dist.	-3049 May 08 j 14:23	13° A 39'46	0.40556 AU
	-3054 May 14 j 14:52	0° Υ		direct	-3049 Jun 04 j 19:24	9° A 09'34	
	-3054 Jun 29 j 14:16	0° B			-3049 Aug 05 j 21:44	0° M	
asc. node	-3054 Jul 10 j 07:32	6° B 43'49			-3049 Sep 22 j 11:11	0° J	
	-3054 Aug 17 j 22:05	0° II			-3049 Nov 04 j 20:26	0° Z	
	-3054 Oct 13 j 18:36	0° S			-3049 Dec 17 j 22:51	0° \approx	
retrograde	-3054 Dec 14 j 03:50	16° S 47'57			-3048 Jan 31 j 00:33	0° H	
opposition	-3053 Jan 21 j 12:29	8° S 01'38	4°54'14	asc. node	-3048 Mar 01 j 00:59	19° H 55'45	
greatest brilliancy	-3053 Jan 22 j 12:28	7° S 38'21	-1.4m		-3048 Mar 16 j 10:18	0° Υ	
min. Earth dist.	-3053 Jan 26 j 07:11	6° S 10'18	0.63260 AU	evening set	-3048 Apr 29 j 11:35	28° Υ 24'35	
	-3053 Feb 14 j 11:38	30° R II			-3048 May 01 j 23:14	0° B	
direct	-3053 Mar 03 j 16:03	28° II 02'48		max. Earth dist.	-3048 Jun 14 j 07:49	27° B 38'41	2.67197 AU
	-3053 Mar 21 j 20:06	0° S					
	-3053 May 30 j 09:59	0° Ω		conjunction	-3048 Jun 16 j 01:23	28° B 44'54	0°53'11
	-3053 Jul 16 j 11:43	0° M		minimum elong	-3048 Jun 16 j 00:08	28° B 42'53	0°53'14
desc. node	-3053 Jul 19 j 15:05	2° M 09'39			-3048 Jun 18 j 00:32	0° II	
	-3053 Aug 27 j 07:32	0° A		morning rise	-3048 Jul 31 j 08:15	27° II 43'50	
	-3053 Oct 05 j 16:08	0° M			-3048 Aug 03 j 20:47	0° S	
	-3053 Nov 13 j 02:01	0° J			-3048 Sep 18 j 23:58	0° Ω	
	-3053 Dec 21 j 16:42	0° Z			-3048 Nov 03 j 06:38	0° M	
evening set	-3052 Jan 24 j 00:54	25° Z 15'16			-3048 Dec 17 j 21:45	0° A	
	-3052 Jan 30 j 10:16	0° \approx			-3047 Jan 31 j 10:12	0° M	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 36

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

desc. node	-3047 Mar 10 j 15:25	25° \mathbb{M} 07'15		-3042 Apr 19 j 18:17	0° \mathbb{I}	
	-3047 Mar 18 j 08:20	0° \mathbb{J}		-3042 Jun 07 j 23:33	0° \mathbb{G}	
	-3047 May 12 j 20:19	0° \mathbb{Z}		-3042 Jul 23 j 17:23	0° \mathbb{Q}	
retrograde	-3047 Jun 17 j 15:19	7° \mathbb{Z} 55'54	evening set	-3042 Aug 27 j 13:55	24° \mathbb{Q} 13'18	
min. Earth dist.	-3047 Jul 14 j 10:15	3° \mathbb{Z} 27'37	0.39690 AU	-3042 Sep 04 j 15:44	0° \mathbb{M}	
greatest brilliancy	-3047 Jul 18 j 17:14	2° \mathbb{Z} 12'03	-2.7m	max. Earth dist.	-3042 Sep 12 j 10:11	5° \mathbb{M} 36'54 2.45187 AU
opposition	-3047 Jul 20 j 09:12	1° \mathbb{Z} 42'30	-6°-38'-26		-3042 Oct 15 j 08:11	0° \mathbb{L}
	-3047 Jul 26 j 08:46	30° \mathbb{R} \mathbb{J}				
direct	-3047 Aug 19 j 15:12	26° \mathbb{J} 20'46		conjunction	-3042 Oct 20 j 16:42	4° \mathbb{L} 02'58 0°07'31
	-3047 Sep 13 j 03:17	0° \mathbb{Z}		minimum elong	-3042 Oct 20 j 17:11	4° \mathbb{L} 03'54 0°07'30
	-3047 Nov 16 j 22:51	0° \approx		behind sun begin	-3042 Oct 19 j 19:21	3° \mathbb{L} 22'33
	-3046 Jan 06 j 06:11	0° \mathbb{H}		behind sun end	-3042 Oct 21 j 15:01	4° \mathbb{L} 45'18
asc. node	-3046 Jan 17 j 00:28	6° \mathbb{H} 37'13		desc. node	-3042 Oct 31 j 11:39	12° \mathbb{L} 16'08
	-3046 Feb 23 j 18:07	0° \mathbb{Y}			-3042 Nov 23 j 11:07	0° \mathbb{M}
	-3046 Apr 12 j 22:33	0° \mathbb{B}		greatest brilliancy	-3042 Dec 12 j 23:40	15° \mathbb{M} 14'00 1.2m
	-3046 May 30 j 17:29	0° \mathbb{I}		morning rise	-3042 Dec 20 j 19:54	21° \mathbb{M} 22'46
evening set	-3046 Jun 07 j 02:33	4° \mathbb{I} 40'33			-3042 Dec 31 j 19:47	0° \mathbb{J}
max. Earth dist.	-3046 Jul 08 j 05:14	24° \mathbb{I} 35'26	2.64667 AU		-3041 Feb 08 j 06:42	0° \mathbb{Z}
	-3046 Jul 16 j 13:39	0° \mathbb{G}			-3041 Mar 19 j 17:07	0° \approx
					-3041 Apr 30 j 01:02	0° \mathbb{H}
conjunction	-3046 Jul 23 j 11:37	4° \mathbb{G} 30'09	1°10'34		-3041 Jun 13 j 08:31	0° \mathbb{Y}
minimum elong	-3046 Jul 23 j 11:22	4° \mathbb{G} 29'45	1°10'40		-3041 Aug 02 j 00:21	0° \mathbb{B}
	-3046 Aug 30 j 23:15	0° \mathbb{Q}		asc. node	-3041 Sep 08 j 23:44	18° \mathbb{B} 36'48
morning rise	-3046 Sep 07 j 02:56	4° \mathbb{Q} 49'45		retrograde	-3041 Oct 25 j 22:45	29° \mathbb{B} 44'38
	-3046 Oct 13 j 17:23	0° \mathbb{M}		opposition	-3041 Dec 04 j 22:03	19° \mathbb{B} 59'24 3°00'25
	-3046 Nov 24 j 22:45	0° \mathbb{L}		min. Earth dist.	-3041 Dec 04 j 08:42	20° \mathbb{B} 12'49 0.67056 AU
	-3045 Jan 04 j 23:12	0° \mathbb{M}		greatest brilliancy	-3041 Dec 04 j 18:26	20° \mathbb{B} 03'02 -1.3m
desc. node	-3045 Jan 26 j 15:33	16° \mathbb{M} 05'00		direct	-3040 Jan 14 j 05:32	10° \mathbb{B} 15'49
	-3045 Feb 14 j 08:25	0° \mathbb{J}			-3040 Mar 22 j 05:42	0° \mathbb{I}
	-3045 Mar 27 j 01:27	0° \mathbb{Z}			-3040 May 16 j 11:45	0° \mathbb{G}
	-3045 May 09 j 01:41	0° \approx			-3040 Jul 02 j 22:20	0° \mathbb{Q}
	-3045 Jun 30 j 08:46	0° \mathbb{H}			-3040 Aug 15 j 07:16	0° \mathbb{M}
retrograde	-3045 Aug 12 j 07:18	10° \mathbb{H} 56'48		desc. node	-3040 Sep 17 j 10:50	24° \mathbb{M} 21'22
min. Earth dist.	-3045 Sep 11 j 17:44	4° \mathbb{H} 35'08	0.51620 AU		-3040 Sep 24 j 22:23	0° \mathbb{L}
greatest brilliancy	-3045 Sep 18 j 00:32	2° \mathbb{H} 14'00	-2.0m	evening set	-3040 Oct 21 j 12:18	20° \mathbb{L} 24'14
opposition	-3045 Sep 19 j 06:00	1° \mathbb{H} 46'16	-3°-26'-32		-3040 Nov 02 j 19:40	0° \mathbb{M}
	-3045 Sep 24 j 01:46	30° \mathbb{R} \approx			-3040 Dec 10 j 22:26	0° \mathbb{J}
direct	-3045 Oct 23 j 20:11	24° \mathbb{R} 13'29				
	-3045 Nov 25 j 04:12	0° \mathbb{H}		conjunction	-3040 Dec 24 j 21:19	10° \mathbb{J} 59'19 0°-58'-15
asc. node	-3045 Dec 04 j 23:47	3° \mathbb{H} 27'36		minimum elong	-3040 Dec 24 j 18:31	10° \mathbb{J} 53'49 0°58'20
	-3044 Jan 29 j 11:10	0° \mathbb{Y}			-3039 Jan 18 j 05:11	0° \mathbb{Z}
	-3044 Mar 22 j 03:08	0° \mathbb{B}		max. Earth dist.	-3039 Feb 01 j 19:59	11° \mathbb{Z} 16'47 2.38681 AU
	-3044 May 10 j 17:38	0° \mathbb{I}			-3039 Feb 26 j 12:46	0° \approx
	-3044 Jun 27 j 04:31	0° \mathbb{G}		morning rise	-3039 Mar 03 j 03:10	3° \mathbb{R} 25'58
evening set	-3044 Jul 14 j 19:54	11° \mathbb{G} 30'55			-3039 Apr 08 j 15:02	0° \mathbb{H}
max. Earth dist.	-3044 Aug 03 j 16:52	24° \mathbb{G} 45'10	2.56978 AU		-3039 May 22 j 01:43	0° \mathbb{Y}
	-3044 Aug 11 j 11:03	0° \mathbb{Q}			-3039 Jul 07 j 11:24	0° \mathbb{B}
				asc. node	-3039 Jul 26 j 22:57	11° \mathbb{B} 53'47
conjunction	-3044 Aug 31 j 21:39	14° \mathbb{Q} 02'55	0°58'10		-3039 Aug 27 j 11:20	0° \mathbb{I}
minimum elong	-3044 Aug 31 j 23:06	14° \mathbb{Q} 05'25	0°58'15		-3039 Nov 04 j 13:37	0° \mathbb{G}
	-3044 Sep 23 j 13:15	0° \mathbb{M}		retrograde	-3039 Nov 29 j 07:19	3° \mathbb{G} 22'33
morning rise	-3044 Oct 20 j 23:33	19° \mathbb{M} 50'53			-3039 Dec 22 j 03:31	30° \mathbb{R} \mathbb{I}
	-3044 Nov 03 j 17:28	0° \mathbb{L}		opposition	-3038 Jan 07 j 08:09	24° \mathbb{I} 15'05 4°36'15
desc. node	-3044 Dec 13 j 14:11	0° \mathbb{M} 05'35		greatest brilliancy	-3038 Jan 07 j 22:37	24° \mathbb{I} 00'50 -1.3m
	-3044 Dec 13 j 11:15	0° \mathbb{M}		min. Earth dist.	-3038 Jan 10 j 14:50	22° \mathbb{I} 57'34 0.65611 AU
	-3043 Jan 21 j 10:36	0° \mathbb{J}		direct	-3038 Feb 17 j 13:22	14° \mathbb{I} 13'46
	-3043 Mar 01 j 11:01	0° \mathbb{Z}			-3038 Apr 16 j 15:04	0° \mathbb{G}
	-3043 Apr 10 j 13:16	0° \approx			-3038 Jun 10 j 03:10	0° \mathbb{Q}
	-3043 May 23 j 05:02	0° \mathbb{H}			-3038 Jul 25 j 08:55	0° \mathbb{M}
	-3043 Jul 10 j 18:39	0° \mathbb{Y}		desc. node	-3038 Aug 05 j 09:39	7° \mathbb{M} 48'38
retrograde	-3043 Sep 20 j 18:22	24° \mathbb{Y} 20'51			-3038 Sep 04 j 14:43	0° \mathbb{L}
asc. node	-3043 Oct 21 j 23:22	17° \mathbb{Y} 47'34			-3038 Oct 13 j 17:00	0° \mathbb{M}
min. Earth dist.	-3043 Oct 26 j 06:48	16° \mathbb{Y} 06'38	0.62139 AU		-3038 Nov 20 j 22:32	0° \mathbb{J}
opposition	-3043 Oct 30 j 13:38	14° \mathbb{Y} 23'37	0°20'55	evening set	-3038 Dec 29 j 12:19	0° \mathbb{Z} 06'39
greatest brilliancy	-3043 Oct 30 j 11:25	14° \mathbb{Y} 25'49	-1.5m		-3038 Dec 29 j 08:52	0° \mathbb{Z}
direct	-3043 Dec 07 j 15:42	5° \mathbb{Y} 26'05			-3037 Feb 06 j 21:29	0° \approx
	-3042 Feb 23 j 16:47	0° \mathbb{B}				

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 37

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

conjunction	-3037 Mar 02 j 13:55	17° \approx 23'13	0°-54'-16			-3032 Feb 15 j 20:28	0° \mathbb{M}	
minimum elong	-3037 Mar 02 j 16:16	17° \approx 27'27	0°54'20	desc. node		-3032 Mar 27 j 08:32	22° \mathbb{M} 07'40	
	-3037 Mar 20 j 04:29	0° \mathbb{H}				-3032 Apr 14 j 17:20	0° \mathbb{J}	
max. Earth dist.	-3037 Apr 11 j 14:58	15° \mathbb{H} 41'43	2.51508 AU	retrograde		-3032 May 19 j 15:59	7° \mathbb{J} 05'39	
morning rise	-3037 Apr 29 j 20:49	28° \mathbb{H} 09'22		min. Earth dist.		-3032 Jun 17 j 19:17	2° \mathbb{J} 19'02	0.37663 AU
	-3037 May 02 j 14:23	0° \mathbb{Y}		opposition		-3032 Jun 19 j 05:57	1° \mathbb{J} 55'59	-5°-30'-56
asc. node	-3037 Jun 13 j 21:22	27° \mathbb{Y} 51'42		greatest brilliancy		-3032 Jun 18 j 20:07	2° \mathbb{J} 02'32	-2.9m
	-3037 Jun 17 j 05:08	0° \mathbb{B}				-3032 Jun 26 j 17:09	30° $\mathbb{R}\mathbb{M}$	
	-3037 Aug 04 j 02:12	0° \mathbb{II}		direct		-3032 Jul 19 j 01:56	26° \mathbb{M} 57'42	
	-3037 Sep 24 j 05:12	0° \mathbb{S}				-3032 Aug 10 j 02:21	0° \mathbb{J}	
	-3037 Nov 24 j 14:41	0° \mathbb{Q}				-3032 Oct 12 j 22:35	0° \mathbb{Z}	
retrograde	-3036 Jan 09 j 01:49	10° \mathbb{Q} 02'21				-3032 Nov 30 j 06:09	0° \approx	
opposition	-3036 Feb 14 j 23:10	1° \mathbb{Q} 58'17	4°50'18			-3031 Jan 15 j 22:06	0° \mathbb{H}	
greatest brilliancy	-3036 Feb 16 j 12:38	1° \mathbb{Q} 23'08	-1.6m	asc. node		-3031 Feb 02 j 15:37	11° \mathbb{H} 23'02	
	-3036 Feb 20 j 05:12	30° $\mathbb{R}\mathbb{S}$				-3031 Mar 03 j 19:27	0° \mathbb{Y}	
min. Earth dist.	-3036 Feb 21 j 21:09	29° \mathbb{S} 22'58	0.57766 AU			-3031 Apr 20 j 04:29	0° \mathbb{B}	
direct	-3036 Mar 26 j 07:34	22° \mathbb{S} 20'44		evening set		-3031 May 23 j 07:28	20° \mathbb{B} 56'03	
	-3036 May 02 j 05:11	0° \mathbb{Q}				-3031 Jun 06 j 14:32	0° \mathbb{II}	
desc. node	-3036 Jun 22 j 07:45	26° \mathbb{Q} 10'12		max. Earth dist.		-3031 Jun 28 j 16:04	14° \mathbb{II} 04'24	2.66288 AU
	-3036 Jun 28 j 11:21	0° \mathbb{M}						
	-3036 Aug 11 j 13:01	0° \mathbb{A}		conjunction		-3031 Jul 08 j 20:31	20° \mathbb{II} 36'39	1°06'52
	-3036 Sep 20 j 19:50	0° \mathbb{M}		minimum elong		-3031 Jul 08 j 19:43	20° \mathbb{II} 35'22	1°06'57
	-3036 Oct 29 j 19:07	0° \mathbb{J}				-3031 Jul 23 j 09:20	0° \mathbb{S}	
	-3036 Dec 07 j 20:45	0° \mathbb{Z}		morning rise		-3031 Aug 22 j 23:20	20° \mathbb{S} 01'05	
	-3035 Jan 17 j 00:24	0° \approx				-3031 Sep 06 j 23:58	0° \mathbb{Q}	
evening set	-3035 Feb 26 j 20:35	29° \approx 16'25				-3031 Oct 21 j 05:11	0° \mathbb{M}	
	-3035 Feb 27 j 21:29	0° \mathbb{H}				-3031 Dec 03 j 03:21	0° \mathbb{A}	
	-3035 Apr 12 j 17:34	0° \mathbb{Y}				-3030 Jan 14 j 01:36	0° \mathbb{M}	
				desc. node		-3030 Feb 12 j 07:50	21° \mathbb{M} 08'35	
conjunction	-3035 Apr 22 j 01:00	6° \mathbb{Y} 12'30	0°-5'-8			-3030 Feb 24 j 14:37	0° \mathbb{J}	
minimum elong	-3035 Apr 22 j 01:14	6° \mathbb{Y} 12'53	0°05'08			-3030 Apr 08 j 02:15	0° \mathbb{Z}	
behind sun begin	-3035 Apr 21 j 04:37	5° \mathbb{Y} 38'40				-3030 May 25 j 16:11	0° \approx	
behind sun end	-3035 Apr 22 j 21:50	6° \mathbb{Y} 47'05		retrograde		-3030 Jul 24 j 06:12	19° \approx 39'58	
asc. node	-3035 Apr 30 j 20:09	12° \mathbb{Y} 01'50		min. Earth dist.		-3030 Aug 21 j 12:16	14° \approx 12'14	0.46576 AU
max. Earth dist.	-3035 May 12 j 01:15	19° \mathbb{Y} 23'41	2.61696 AU	greatest brilliancy		-3030 Aug 27 j 19:13	12° \approx 00'45	-2.3m
	-3035 May 28 j 08:46	0° \mathbb{B}		opposition		-3030 Aug 29 j 14:58	11° \approx 22'17	-5°-5'-12
morning rise	-3035 Jun 11 j 01:13	8° \mathbb{B} 48'55		direct		-3030 Oct 01 j 11:47	4° \approx 38'16	
	-3035 Jul 14 j 08:33	0° \mathbb{II}				-3030 Dec 17 j 02:17	0° \mathbb{H}	
	-3035 Aug 31 j 09:23	0° \mathbb{S}		asc. node		-3030 Dec 21 j 15:05	2° \mathbb{H} 21'28	
	-3035 Oct 19 j 20:24	0° \mathbb{Q}				-3029 Feb 09 j 00:00	0° \mathbb{Y}	
	-3035 Dec 12 j 05:45	0° \mathbb{M}				-3029 Mar 31 j 06:41	0° \mathbb{B}	
retrograde	-3034 Mar 03 j 20:32	27° \mathbb{M} 03'59				-3029 May 18 j 23:40	0° \mathbb{II}	
opposition	-3034 Apr 06 j 01:37	20° \mathbb{M} 46'12	2°04'14	evening set		-3029 Jun 30 j 11:04	26° \mathbb{II} 58'40	
greatest brilliancy	-3034 Apr 07 j 02:34	20° \mathbb{M} 26'04	-2.4m			-3029 Jul 05 j 03:06	0° \mathbb{S}	
min. Earth dist.	-3034 Apr 14 j 08:30	18° \mathbb{M} 06'45	0.45139 AU	max. Earth dist.		-3029 Jul 24 j 07:23	12° \mathbb{S} 32'49	2.60573 AU
desc. node	-3034 May 10 j 07:26	13° \mathbb{M} 09'56						
direct	-3034 May 12 j 07:02	13° \mathbb{M} 08'18		conjunction		-3029 Aug 16 j 11:04	28° \mathbb{S} 00'26	1°07'09
	-3034 Jul 06 j 06:57	0° \mathbb{A}		minimum elong		-3029 Aug 16 j 11:54	28° \mathbb{S} 01'49	1°07'14
	-3034 Aug 23 j 16:23	0° \mathbb{M}				-3029 Aug 19 j 09:47	0° \mathbb{Q}	
	-3034 Oct 04 j 21:51	0° \mathbb{J}				-3029 Oct 01 j 16:55	0° \mathbb{M}	
	-3034 Nov 15 j 01:25	0° \mathbb{Z}		morning rise		-3029 Oct 03 j 04:03	1° \mathbb{M} 02'15	
	-3034 Dec 26 j 19:28	0° \approx				-3029 Nov 12 j 05:07	0° \mathbb{A}	
	-3033 Feb 07 j 23:12	0° \mathbb{H}				-3029 Dec 22 j 08:19	0° \mathbb{M}	
asc. node	-3033 Mar 18 j 17:47	26° \mathbb{H} 01'58		desc. node		-3029 Dec 31 j 07:32	6° \mathbb{M} 48'05	
	-3033 Mar 24 j 18:03	0° \mathbb{Y}				-3028 Jan 30 j 17:15	0° \mathbb{J}	
evening set	-3033 Apr 14 j 11:56	13° \mathbb{Y} 34'18				-3028 Mar 10 j 03:53	0° \mathbb{Z}	
	-3033 May 09 j 21:58	0° \mathbb{B}				-3028 Apr 19 j 20:37	0° \approx	
						-3028 Jun 02 j 22:34	0° \mathbb{H}	
conjunction	-3033 Jun 02 j 06:44	14° \mathbb{B} 58'16	0°40'11			-3028 Jul 28 j 08:41	0° \mathbb{Y}	
minimum elong	-3033 Jun 02 j 05:30	14° \mathbb{B} 56'17	0°40'14	retrograde		-3028 Sep 06 j 01:22	9° \mathbb{Y} 05'22	
max. Earth dist.	-3033 Jun 06 j 06:18	17° \mathbb{B} 30'51	2.66709 AU	min. Earth dist.		-3028 Oct 09 j 17:47	1° \mathbb{Y} 30'11	0.58603 AU
	-3033 Jun 25 j 20:04	0° \mathbb{II}				-3028 Oct 13 j 13:10	30° $\mathbb{R}\mathbb{H}$	
morning rise	-3033 Jul 18 j 06:27	14° \mathbb{II} 18'06		opposition		-3028 Oct 15 j 09:56	29° \mathbb{H} 15'38	0°-59'-18
	-3033 Aug 11 j 20:13	0° \mathbb{S}		greatest brilliancy		-3028 Oct 15 j 02:57	29° \mathbb{H} 22'33	-1.7m
	-3033 Sep 27 j 12:25	0° \mathbb{Q}		asc. node		-3028 Nov 07 j 14:31	22° \mathbb{H} 00'46	
	-3033 Nov 12 j 21:09	0° \mathbb{M}		direct		-3028 Nov 21 j 06:31	20° \mathbb{H} 45'32	
	-3033 Dec 29 j 11:30	0° \mathbb{A}				-3027 Jan 03 j 05:20	0° \mathbb{Y}	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 38

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3027 Mar 06 j 21:48	0°♄		max. Earth dist.	-3022 Mar 25 j 04:36	28°≈22'16	2.46418 AU
	-3027 Apr 28 j 00:03	0°♂			-3022 Mar 27 j 11:31	0°♂	
	-3027 Jun 15 j 08:20	0°♄		morning rise	-3022 Apr 09 j 15:51	9°♂17'34	
	-3027 Jul 30 j 20:23	0°♂			-3022 May 09 j 19:48	0°♂	
evening set	-3027 Aug 09 j 12:34	6°♂36'45			-3022 Jun 24 j 14:04	0°♄	
max. Earth dist.	-3027 Aug 25 j 02:44	17°♂26'28	2.50156 AU	asc. node	-3022 Jun 30 j 13:54	3°♄48'21	
	-3027 Sep 11 j 19:30	0°♂			-3022 Aug 12 j 05:01	0°♂	
					-3022 Oct 05 j 03:02	0°♄	
conjunction	-3027 Sep 29 j 13:56	12°♂52'53	0°31'55	retrograde	-3022 Dec 23 j 04:02	25°♄15'00	
minimum elong	-3027 Sep 29 j 15:30	12°♂55'45	0°31'56	opposition	-3021 Jan 30 j 01:29	16°♄42'06	4°57'48
	-3027 Oct 22 j 15:49	0°♄		greatest brilliancy	-3021 Jan 31 j 06:38	16°♄14'04	-1.5m
desc. node	-3027 Nov 17 j 06:24	19°♄26'14		min. Earth dist.	-3021 Feb 04 j 14:48	14°♄34'00	0.61568 AU
morning rise	-3027 Nov 24 j 13:08	25°♄01'58		direct	-3021 Mar 12 j 00:37	6°♄47'59	
	-3027 Nov 30 j 23:35	0°♂			-3021 May 22 j 07:32	0°♂	
	-3026 Jan 08 j 12:36	0°♄		desc. node	-3021 Jul 10 j 01:06	29°♂44'21	
	-3026 Feb 16 j 03:02	0°♄			-3021 Jul 10 j 10:26	0°♂	
	-3026 Mar 27 j 16:50	0°≈			-3021 Aug 21 j 21:03	0°♄	
	-3026 May 08 j 07:13	0°♂			-3021 Sep 30 j 12:00	0°♂	
	-3026 Jun 22 j 11:00	0°♂			-3021 Nov 08 j 01:25	0°♄	
	-3026 Aug 14 j 19:48	0°♄			-3021 Dec 16 j 18:50	0°♄	
asc. node	-3026 Sep 25 j 13:42	14°♄55'21			-3020 Jan 25 j 14:41	0°≈	
retrograde	-3026 Oct 12 j 13:18	16°♄40'20		evening set	-3020 Feb 06 j 07:57	8°≈35'58	
min. Earth dist.	-3026 Nov 19 j 13:22	7°♄35'49	0.65872 AU		-3020 Mar 07 j 04:32	0°♂	
opposition	-3026 Nov 21 j 14:22	6°♄46'28	2°06'29				
greatest brilliancy	-3026 Nov 21 j 08:01	6°♄52'52	-1.3m	conjunction	-3020 Apr 03 j 16:27	19°♂04'43	0°-25'-15
	-3026 Dec 10 j 20:10	30°♂♂		minimum elong	-3020 Apr 03 j 17:45	19°♂06'56	0°25'17
direct	-3026 Dec 31 j 04:30	27°♂♂17'27			-3020 Apr 19 j 19:10	0°♂	
	-3025 Jan 22 j 07:53	0°♄		max. Earth dist.	-3020 May 01 j 02:28	7°♂33'36	2.58295 AU
	-3025 Apr 04 j 02:45	0°♂		asc. node	-3020 May 17 j 11:42	18°♂22'38	
	-3025 May 25 j 23:56	0°♄		morning rise	-3020 May 26 j 07:57	24°♂09'19	
	-3025 Jul 11 j 13:52	0°♂			-3020 Jun 04 j 08:17	0°♄	
	-3025 Aug 23 j 17:11	0°♂			-3020 Jul 21 j 12:57	0°♂	
evening set	-3025 Sep 28 j 17:24	26°♂30'57			-3020 Sep 08 j 08:56	0°♄	
	-3025 Oct 03 j 08:12	0°♄			-3020 Oct 30 j 03:43	0°♂	
desc. node	-3025 Oct 05 j 04:01	1°♄22'58			-3019 Jan 02 j 06:19	0°♂	
max. Earth dist.	-3025 Nov 04 j 07:01	24°♄32'22	2.38302 AU	retrograde	-3019 Feb 08 j 00:12	6°♂57'42	
	-3025 Nov 11 j 07:09	0°♂		opposition	-3019 Mar 14 j 20:54	29°♂51'56	3°42'55
					-3019 Mar 14 j 11:39	30°♂♂	
conjunction	-3025 Nov 28 j 03:37	13°♂12'29	0°-36'-18	greatest brilliancy	-3019 Mar 16 j 12:29	29°♂17'17	-2.0m
minimum elong	-3025 Nov 28 j 00:54	13°♂07'09	0°36'21	min. Earth dist.	-3019 Mar 23 j 06:29	26°♂56'42	0.50354 AU
	-3025 Dec 19 j 11:29	0°♄		direct	-3019 Apr 22 j 06:05	21°♂10'36	
	-3024 Jan 26 j 18:55	0°♄		desc. node	-3019 May 26 j 23:51	28°♂24'34	
morning rise	-3024 Feb 04 j 01:58	6°♄24'58			-3019 May 31 j 00:05	0°♂	
	-3024 Mar 06 j 02:13	0°≈			-3019 Jul 24 j 01:00	0°♄	
	-3024 Apr 16 j 04:24	0°♂			-3019 Sep 04 j 22:28	0°♂	
	-3024 May 29 j 18:50	0°♂			-3019 Oct 15 j 05:10	0°♄	
	-3024 Jul 15 j 21:36	0°♄			-3019 Nov 24 j 04:59	0°♄	
asc. node	-3024 Aug 12 j 13:53	16°♄08'09			-3018 Jan 04 j 02:48	0°≈	
	-3024 Sep 07 j 23:08	0°♂			-3018 Feb 15 j 14:58	0°♂	
retrograde	-3024 Nov 15 j 06:27	20°♂24'57		evening set	-3018 Mar 28 j 13:01	27°♂44'23	
opposition	-3024 Dec 24 j 18:59	11°♂00'00	4°06'58		-3018 Mar 31 j 22:35	0°♂	
greatest brilliancy	-3024 Dec 25 j 00:55	10°♂54'05	-1.3m	asc. node	-3018 Apr 04 j 09:27	2°♂17'26	
min. Earth dist.	-3024 Dec 26 j 13:20	10°♂17'50	0.66945 AU		-3018 May 16 j 19:46	0°♄	
direct	-3023 Feb 03 j 19:47	1°♂01'59					
	-3023 Apr 30 j 00:17	0°♄		conjunction	-3018 May 17 j 23:51	0°♄45'17	0°24'22
	-3023 Jun 19 j 08:09	0°♂		minimum elong	-3018 May 17 j 22:56	0°♄43'48	0°24'25
	-3023 Aug 02 j 13:57	0°♂		max. Earth dist.	-3018 May 27 j 20:43	7°♄06'25	2.65405 AU
desc. node	-3023 Aug 22 j 02:05	14°♂04'11			-3018 Jul 02 j 16:48	0°♂	
	-3023 Sep 12 j 11:45	0°♄		morning rise	-3018 Jul 04 j 03:09	0°♂54'36	
	-3023 Oct 21 j 10:50	0°♂			-3018 Aug 18 j 23:38	0°♄	
	-3023 Nov 28 j 14:14	0°♄			-3018 Oct 05 j 10:08	0°♂	
evening set	-3023 Dec 02 j 06:13	2°♄53'13			-3018 Nov 22 j 10:04	0°♂	
	-3022 Jan 05 j 22:12	0°♄			-3017 Jan 11 j 15:10	0°♄	
					-3017 Mar 14 j 05:34	0°♂	
conjunction	-3022 Feb 05 j 22:29	23°♄42'34	-1°-5'-30	desc. node	-3017 Apr 14 j 00:08	6°♂44'20	
minimum elong	-3022 Feb 05 j 23:45	23°♄44'57	1°05'36	retrograde	-3017 Apr 18 j 13:18	6°♂52'12	
	-3022 Feb 14 j 07:46	0°≈		opposition	-3017 May 19 j 06:06	1°♂43'51	-2°-29'-57

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 39

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

greatest brilliancy	-3017 May 19 j 16:46	1° \mathbb{M} 36'30	-2.8m	conjunction	-3012 Sep 10 j 19:56	24° \mathcal{Q} 15'25	0°50'21
min. Earth dist.	-3017 May 23 j 03:01	0° \mathbb{M} 39'54	0.38729 AU	minimum elong	-3012 Sep 10 j 21:35	24° \mathcal{Q} 18'21	0°50'24
	-3017 May 25 j 14:21	30° \mathbb{R} $\underline{\mathbb{A}}$			-3012 Sep 18 j 21:42	0° \mathbb{M}	
direct	-3017 Jun 19 j 23:07	26° $\underline{\mathbb{A}}$ 07'31			-3012 Oct 29 j 23:11	0° $\underline{\mathbb{A}}$	
	-3017 Jul 14 j 12:22	0° \mathbb{M}		morning rise	-3012 Nov 01 j 16:03	2° $\underline{\mathbb{A}}$ 01'04	
	-3017 Sep 12 j 16:53	0° \mathbb{Z}		desc. node	-3012 Dec 03 j 23:08	26° $\underline{\mathbb{A}}$ 28'39	
	-3017 Oct 28 j 14:45	0° \mathcal{Z}			-3012 Dec 08 j 13:22	0° \mathbb{M}	
	-3017 Dec 11 j 21:57	0° \approx			-3011 Jan 16 j 08:37	0° \mathbb{Z}	
	-3016 Jan 25 j 16:06	0° \mathbb{H}			-3011 Feb 24 j 04:46	0° \mathcal{Z}	
asc. node	-3016 Feb 20 j 07:29	16° \mathbb{H} 52'34			-3011 Apr 05 j 01:05	0° \approx	
	-3016 Mar 11 j 11:57	0° \mathbb{Y}			-3011 May 17 j 03:56	0° \mathbb{H}	
	-3016 Apr 27 j 06:39	0° \mathcal{B}			-3011 Jul 02 j 22:34	0° \mathbb{Y}	
evening set	-3016 May 08 j 06:51	7° \mathcal{B} 00'31			-3011 Sep 06 j 15:00	0° \mathcal{B}	
	-3016 Jun 13 j 10:20	0° \mathbb{I}		retrograde	-3011 Sep 28 j 20:17	2° \mathcal{B} 59'34	
max. Earth dist.	-3016 Jun 19 j 15:17	3° \mathbb{I} 57'16	2.67112 AU	asc. node	-3011 Oct 12 j 05:44	1° \mathcal{B} 44'23	
					-3011 Oct 19 j 14:33	30° \mathbb{R} \mathbb{Y}	
conjunction	-3016 Jun 24 j 08:54	6° \mathbb{I} 58'29	0°59'13	min. Earth dist.	-3011 Nov 04 j 06:55	24° \mathbb{Y} 26'26	0.63713 AU
minimum elong	-3016 Jun 24 j 07:45	6° \mathbb{I} 56'39	0°59'18	opposition	-3011 Nov 07 j 19:03	23° \mathbb{Y} 01'52	1°02'38
	-3016 Jul 30 j 05:52	0° \mathcal{S}		greatest brilliancy	-3011 Nov 07 j 13:48	23° \mathbb{Y} 07'09	-1.4m
morning rise	-3016 Aug 08 j 10:59	5° \mathcal{S} 57'55		direct	-3011 Dec 16 j 11:11	13° \mathbb{Y} 51'56	
	-3016 Sep 14 j 04:11	0° \mathcal{Q}			-3010 Feb 14 j 17:14	0° \mathcal{B}	
	-3016 Oct 29 j 00:48	0° \mathbb{M}			-3010 Apr 13 j 21:42	0° \mathbb{I}	
	-3016 Dec 11 j 22:41	0° $\underline{\mathbb{A}}$			-3010 Jun 02 j 22:21	0° \mathcal{S}	
desc. node	-3015 Jan 24 j 06:42	0° \mathbb{M}			-3010 Jul 18 j 23:12	0° \mathcal{Q}	
	-3015 Mar 01 j 01:58	24° \mathbb{M} 40'20			-3010 Aug 30 j 23:44	0° \mathbb{M}	
	-3015 Mar 08 j 22:35	0° \mathbb{Z}		evening set	-3010 Sep 07 j 13:55	5° \mathbb{M} 29'05	
	-3015 Apr 24 j 21:53	0° \mathcal{Z}		max. Earth dist.	-3010 Sep 25 j 15:37	18° \mathbb{M} 45'22	2.42476 AU
retrograde	-3015 Jul 02 j 01:13	24° \mathcal{Z} 29'02			-3010 Oct 10 j 15:57	0° $\underline{\mathbb{A}}$	
min. Earth dist.	-3015 Jul 28 j 19:10	19° \mathcal{Z} 48'25	0.41794 AU	desc. node	-3010 Oct 21 j 21:33	8° $\underline{\mathbb{A}}$ 31'36	
greatest brilliancy	-3015 Aug 03 j 05:24	18° \mathcal{Z} 06'23	-2.6m				
opposition	-3015 Aug 05 j 05:09	17° \mathcal{Z} 28'40	-6°-23'-8	conjunction	-3010 Nov 02 j 18:08	17° $\underline{\mathbb{A}}$ 37'22	0°-8'-17
direct	-3015 Sep 05 j 05:05	11° \mathcal{Z} 39'44		minimum elong	-3010 Nov 02 j 17:31	17° $\underline{\mathbb{A}}$ 36'12	0°08'20
	-3015 Nov 05 j 17:24	0° \approx		behind sun begin	-3010 Nov 01 j 19:22	16° $\underline{\mathbb{A}}$ 53'33	
	-3015 Dec 30 j 07:03	0° \mathbb{H}		behind sun end	-3010 Nov 03 j 15:41	18° $\underline{\mathbb{A}}$ 18'54	
asc. node	-3014 Jan 07 j 05:50	4° \mathbb{H} 41'54			-3010 Nov 18 j 17:32	0° \mathbb{M}	
	-3014 Feb 18 j 03:50	0° \mathbb{Y}			-3010 Dec 27 j 00:15	0° \mathbb{Z}	
	-3014 Apr 07 j 23:00	0° \mathcal{B}		morning rise	-3009 Jan 05 j 19:24	7° \mathbb{Z} 41'36	
	-3014 May 26 j 00:48	0° \mathbb{I}			-3009 Feb 03 j 09:16	0° \mathcal{Z}	
evening set	-3014 Jun 15 j 13:49	13° \mathbb{I} 01'07			-3009 Mar 14 j 17:38	0° \approx	
	-3014 Jul 11 j 23:28	0° \mathcal{S}			-3009 Apr 24 j 21:52	0° \mathbb{H}	
max. Earth dist.	-3014 Jul 13 j 22:32	1° \mathcal{S} 16'28	2.63432 AU		-3009 Jun 07 j 20:26	0° \mathbb{Y}	
					-3009 Jul 26 j 05:20	0° \mathcal{B}	
conjunction	-3014 Aug 01 j 00:48	13° \mathcal{S} 07'24	1°10'43	asc. node	-3009 Aug 30 j 05:45	18° \mathcal{B} 44'46	
minimum elong	-3014 Aug 01 j 00:56	13° \mathcal{S} 07'38	1°10'48		-3009 Sep 25 j 16:12	0° \mathbb{I}	
	-3014 Aug 26 j 08:05	0° \mathcal{Q}		retrograde	-3009 Nov 02 j 16:34	7° \mathbb{I} 35'38	
morning rise	-3014 Sep 16 j 04:47	14° \mathcal{Q} 12'24			-3009 Dec 07 j 08:36	30° \mathbb{R} \mathcal{B}	
	-3014 Oct 08 j 22:23	0° \mathbb{M}		opposition	-3009 Dec 12 j 12:51	27° \mathcal{B} 56'38	3°27'39
	-3014 Nov 19 j 21:26	0° $\underline{\mathbb{A}}$		greatest brilliancy	-3009 Dec 12 j 11:58	27° \mathcal{B} 57'31	-1.2m
	-3014 Dec 30 j 13:44	0° \mathbb{M}		min. Earth dist.	-3009 Dec 12 j 19:01	27° \mathcal{B} 50'27	0.67286 AU
desc. node	-3013 Jan 17 j 01:02	13° \mathbb{M} 04'54		direct	-3008 Jan 22 j 03:35	18° \mathcal{B} 06'54	
	-3013 Feb 08 j 12:46	0° \mathbb{Z}			-3008 Mar 12 j 06:43	0° \mathbb{I}	
	-3013 Mar 20 j 15:50	0° \mathcal{Z}			-3008 May 10 j 10:36	0° \mathcal{S}	
	-3013 May 01 j 11:30	0° \approx			-3008 Jun 27 j 17:28	0° \mathcal{Q}	
	-3013 Jun 17 j 20:19	0° \mathbb{H}			-3008 Aug 10 j 09:30	0° \mathbb{M}	
retrograde	-3013 Aug 22 j 03:05	22° \mathbb{H} 04'58		desc. node	-3008 Sep 07 j 19:52	20° \mathbb{M} 45'30	
min. Earth dist.	-3013 Sep 22 j 18:20	15° \mathbb{H} 15'28	0.54247 AU		-3008 Sep 20 j 03:16	0° $\underline{\mathbb{A}}$	
opposition	-3013 Sep 29 j 16:41	12° \mathbb{H} 35'36	-2°-30'-28		-3008 Oct 29 j 01:26	0° \mathbb{M}	
greatest brilliancy	-3013 Sep 28 j 20:03	12° \mathbb{H} 55'28	-1.9m	evening set	-3008 Nov 05 j 01:15	5° \mathbb{M} 28'46	
direct	-3013 Nov 04 j 02:44	4° \mathbb{H} 40'16			-3008 Dec 06 j 04:14	0° \mathbb{Z}	
asc. node	-3013 Nov 25 j 05:09	7° \mathbb{H} 15'50					
	-3012 Jan 21 j 10:55	0° \mathbb{Y}		conjunction	-3007 Jan 09 j 17:39	27° \mathbb{Z} 06'44	-1°-5'-2
	-3012 Mar 16 j 09:09	0° \mathcal{B}		minimum elong	-3007 Jan 09 j 16:08	27° \mathbb{Z} 03'47	1°05'07
	-3012 May 05 j 17:29	0° \mathbb{I}			-3007 Jan 13 j 10:52	0° \mathcal{Z}	
	-3012 Jun 22 j 11:37	0° \mathcal{S}			-3007 Feb 21 j 18:17	0° \approx	
evening set	-3012 Jul 23 j 21:47	20° \mathcal{S} 36'49		max. Earth dist.	-3007 Feb 27 j 11:34	4° \approx 16'06	2.41176 AU
	-3012 Aug 06 j 20:19	0° \mathcal{Q}		morning rise	-3007 Mar 17 j 13:50	17° \approx 34'54	
max. Earth dist.	-3012 Aug 10 j 20:58	2° \mathcal{Q} 44'25	2.54705 AU		-3007 Apr 03 j 19:46	0° \mathbb{H}	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 40

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-3007 May 17 j 04:03	0°Υ				-3002 May 06 j 06:48	30°R൬	
	-3007 Jul 02 j 05:31	0°Ϣ		direct		-3002 May 25 j 02:22	27°൬39'24	
asc. node	-3007 Jul 17 j 05:04	9°Ϣ19'03				-3002 Jun 12 j 19:35	0°♎	
	-3007 Aug 21 j 01:45	0°Π				-3002 Aug 14 j 06:14	0°♍	
	-3007 Oct 19 j 20:49	0°☿				-3002 Sep 27 j 17:25	0°♁	
retrograde	-3007 Dec 07 j 17:06	11°☿26'06				-3002 Nov 08 j 21:29	0°♄	
opposition	-3006 Jan 15 j 09:09	2°☿29'42	4°48'00			-3002 Dec 21 j 06:44	0°≈	
greatest brilliancy	-3006 Jan 16 j 04:47	2°☿10'29	-1.3m			-3001 Feb 02 j 20:30	0°✠	
min. Earth dist.	-3006 Jan 19 j 11:25	0°☿53'35	0.64431 AU	asc. node		-3001 Mar 08 j 22:37	22°✠46'38	
	-3006 Jan 21 j 18:55	30°R൬				-3001 Mar 19 j 22:16	0°Υ	
direct	-3006 Feb 25 j 13:57	22°Π28'59		evening set		-3001 Apr 23 j 18:18	22°Υ36'45	
	-3006 Apr 04 j 07:30	0°☿				-3001 May 05 j 06:14	0°Ϣ	
	-3006 Jun 03 j 13:41	0°♁						
	-3006 Jul 19 j 19:50	0°൬		conjunction		-3001 Jun 10 j 19:35	23°Ϣ21'13	0°48'06
desc. node	-3006 Jul 26 j 17:43	4°൬49'05		minimum elong		-3001 Jun 10 j 18:18	23°Ϣ19'10	0°48'11
	-3006 Aug 30 j 10:10	0°♎		max. Earth dist.		-3001 Jun 11 j 15:45	23°Ϣ53'22	2.67092 AU
	-3006 Oct 08 j 16:26	0°♍				-3001 Jun 21 j 05:47	0°Π	
	-3006 Nov 16 j 00:15	0°♁		morning rise		-3001 Jul 26 j 08:14	22°Π25'16	
	-3006 Dec 24 j 12:30	0°♄				-3001 Aug 07 j 03:49	0°☿	
evening set	-3005 Jan 13 j 05:41	15°♄04'36				-3001 Sep 22 j 12:36	0°♁	
	-3005 Feb 02 j 02:57	0°≈				-3001 Nov 07 j 06:12	0°൬	
						-3001 Dec 22 j 15:32	0°♎	
conjunction	-3005 Mar 15 j 06:23	29°≈51'15	0°-44'-39			-3000 Feb 06 j 11:37	0°♍	
minimum elong	-3005 Mar 15 j 08:34	29°≈55'08	0°44'41	desc. node		-3000 Mar 17 j 18:03	24°♍59'55	
	-3005 Mar 15 j 11:19	0°✠				-3000 Mar 26 j 10:25	0°♁	
max. Earth dist.	-3005 Apr 19 j 17:55	24°✠28'29	2.54115 AU	retrograde		-3000 Jun 05 j 11:58	25°♁03'27	
	-3005 Apr 27 j 21:47	0°Υ		min. Earth dist.		-3000 Jul 02 j 22:27	20°♁34'48	0.38436 AU
morning rise	-3005 May 10 j 07:23	8°Υ18'23		greatest brilliancy		-3000 Jul 05 j 23:05	19°♁44'10	-2.8m
asc. node	-3005 Jun 04 j 04:12	24°Υ39'13		opposition		-3000 Jul 07 j 03:11	19°♁24'29	-6°-26'-9
	-3005 Jun 12 j 10:28	0°Ϣ		direct		-3000 Aug 06 j 00:18	14°♁19'12	
	-3005 Jul 29 j 23:33	0°Π				-3000 Sep 29 j 19:30	0°♄	
	-3005 Sep 18 j 00:58	0°☿				-3000 Nov 22 j 12:19	0°≈	
	-3005 Nov 13 j 05:00	0°♁				-2999 Jan 09 j 21:11	0°✠	
retrograde	-3004 Jan 19 j 12:27	19°♁29'56		asc. node		-2999 Jan 23 j 21:52	8°✠49'17	
opposition	-3004 Feb 24 j 18:16	11°♁44'16	4°34'58			-2999 Feb 26 j 13:41	0°Υ	
greatest brilliancy	-3004 Feb 26 j 10:36	11°♁07'07	-1.8m			-2999 Apr 15 j 08:29	0°Ϣ	
min. Earth dist.	-3004 Mar 03 j 08:06	8°♁57'33	0.55312 AU	evening set		-2999 May 31 j 19:44	29°Ϣ16'16	
direct	-3004 Apr 04 j 13:49	2°♁21'28				-2999 Jun 01 j 23:20	0°Π	
desc. node	-3004 Jun 12 j 17:35	25°♁39'40		max. Earth dist.		-2999 Jul 04 j 04:28	20°Π33'23	2.65499 AU
	-3004 Jun 20 j 06:50	0°൬						
	-3004 Aug 05 j 03:50	0°♎		conjunction		-2999 Jul 17 j 05:15	28°Π58'07	1°09'31
	-3004 Sep 15 j 01:59	0°♍		minimum elong		-2999 Jul 17 j 04:46	28°Π57'20	1°09'36
	-3004 Oct 24 j 09:17	0°♁				-2999 Jul 18 j 19:26	0°☿	
	-3004 Dec 02 j 16:37	0°♄		morning rise		-2999 Aug 31 j 13:02	28°☿48'15	
	-3003 Jan 12 j 01:04	0°≈				-2999 Sep 02 j 07:53	0°♁	
	-3003 Feb 23 j 02:03	0°✠				-2999 Oct 16 j 07:35	0°൬	
evening set	-3003 Mar 10 j 04:06	10°✠26'26				-2999 Nov 27 j 20:31	0°♎	
	-3003 Apr 08 j 01:11	0°Υ				-2998 Jan 08 j 06:19	0°♍	
asc. node	-3003 Apr 21 j 01:17	8°Υ38'42		desc. node		-2998 Feb 02 j 17:49	18°♍42'36	
						-2998 Feb 18 j 02:07	0°♁	
conjunction	-3003 May 01 j 20:07	15°Υ44'43	0°06'15			-2998 Mar 31 j 09:41	0°♄	
minimum elong	-3003 May 01 j 19:51	15°Υ44'17	0°06'17			-2998 May 14 j 16:28	0°≈	
behind sun begin	-3003 May 01 j 00:21	15°Υ12'19				-2998 Jul 15 j 20:07	0°✠	
behind sun end	-3003 May 02 j 15:21	16°Υ16'13		retrograde		-2998 Aug 04 j 09:58	2°✠35'34	
max. Earth dist.	-3003 May 18 j 00:17	26°Υ17'45	2.63262 AU			-2998 Aug 23 j 05:15	30°R≈	
	-3003 May 23 j 17:31	0°Ϣ		min. Earth dist.		-2998 Sep 02 j 21:00	26°≈37'26	0.49375 AU
morning rise	-3003 Jun 19 j 15:24	17°Ϣ17'03		greatest brilliancy		-2998 Sep 09 j 05:24	24°≈18'32	-2.1m
	-3003 Jul 09 j 15:24	0°Π		opposition		-2998 Sep 10 j 17:35	23°≈45'18	-4°-9'-28
	-3003 Aug 26 j 08:12	0°☿		direct		-2998 Oct 14 j 13:23	16°≈33'08	
	-3003 Oct 13 j 21:37	0°♁				-2998 Dec 05 j 18:46	0°✠	
	-3003 Dec 03 j 15:33	0°൬		asc. node		-2998 Dec 11 j 21:15	2°✠42'37	
	-3002 Feb 01 j 14:20	0°♎				-2997 Feb 02 j 09:58	0°Υ	
retrograde	-3002 Mar 19 j 04:47	10°♎24'15				-2997 Mar 25 j 22:15	0°Ϣ	
opposition	-3002 Apr 20 j 07:53	4°♎34'28	0°40'55			-2997 May 14 j 03:11	0°Π	
greatest brilliancy	-3002 Apr 20 j 16:11	4°♎28'09	-2.5m			-2997 Jun 30 j 11:33	0°☿	
min. Earth dist.	-3002 Apr 27 j 18:35	2°♎18'34	0.42463 AU	evening set		-2997 Jul 09 j 04:44	5°☿39'55	
desc. node	-3002 Apr 30 j 17:56	1°♎26'50		max. Earth dist.		-2997 Jul 30 j 18:50	19°☿54'21	2.58681 AU

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-2997 Aug 14 j 19:05	0°♈		asc. node	-2992 Aug 02 j 20:29	14°♈10'27	
					-2992 Aug 31 j 04:50	0°♈	
conjunction	-2997 Aug 25 j 17:02	7°♈26'26	1°02'40	retrograde	-2992 Nov 23 j 06:18	28°♈16'02	
minimum elong	-2997 Aug 25 j 18:14	7°♈28'30	1°02'43	opposition	-2991 Jan 01 j 12:37	19°♈00'09	4°25'05
	-2997 Sep 27 j 00:37	0°♈		greatest brilliancy	-2991 Jan 01 j 23:04	18°♈49'48	-1.3m
morning rise	-2997 Oct 13 j 14:23	11°♈52'33		min. Earth dist.	-2991 Jan 04 j 02:37	17°♈58'45	0.66341 AU
	-2997 Nov 07 j 09:09	0°♈		direct	-2991 Feb 11 j 16:23	8°♈59'46	
	-2997 Dec 17 j 07:39	0°♈			-2991 Apr 22 j 01:07	0°♈	
desc. node	-2997 Dec 21 j 16:49	3°♈20'18			-2991 Jun 13 j 13:14	0°♈	
	-2996 Jan 25 j 11:08	0°♈			-2991 Jul 28 j 09:35	0°♈	
	-2996 Mar 04 j 15:14	0°♈		desc. node	-2991 Aug 12 j 12:12	10°♈47'01	
	-2996 Apr 13 j 21:57	0°♈			-2991 Sep 07 j 12:42	0°♈	
	-2996 May 26 j 23:22	0°♈			-2991 Oct 16 j 14:06	0°♈	
	-2996 Jul 16 j 06:56	0°♈			-2991 Nov 23 j 18:30	0°♈	
retrograde	-2996 Sep 14 j 14:28	18°♈26'00		evening set	-2991 Dec 17 j 18:02	18°♈49'07	
min. Earth dist.	-2996 Oct 19 j 07:38	10°♈28'50	0.60655 AU		-2990 Jan 01 j 03:01	0°♈	
opposition	-2996 Oct 24 j 06:04	8°♈30'46	0°-11'-27		-2990 Feb 09 j 13:13	0°♈	
greatest brilliancy	-2996 Nov 02 j 20:26	4°♈52'36	-1.6m				
asc. node	-2996 Oct 28 j 20:22	6°♈42'42		conjunction	-2990 Feb 20 j 06:01	7°♈56'14	-1°00'-8
	-2996 Nov 24 j 14:18	30°♈		minimum elong	-2990 Feb 20 j 08:10	8°♈00'11	1°00'13
direct	-2996 Nov 30 j 19:39	29°♈44'54			-2990 Mar 22 j 17:20	0°♈	
	-2996 Dec 07 j 05:24	0°♈		max. Earth dist.	-2990 Apr 04 j 23:14	9°♈20'23	2.49279 AU
	-2995 Feb 27 j 21:39	0°♈		morning rise	-2990 Apr 21 j 11:44	20°♈46'52	
	-2995 Apr 22 j 14:08	0°♈			-2990 May 05 j 01:01	0°♈	
	-2995 Jun 10 j 11:06	0°♈			-2990 Jun 19 j 15:35	0°♈	
	-2995 Jul 26 j 03:32	0°♈		asc. node	-2990 Jun 20 j 18:35	0°♈43'16	
evening set	-2995 Aug 19 j 14:49	16°♈51'45			-2990 Aug 06 j 18:09	0°♈	
max. Earth dist.	-2995 Sep 03 j 21:11	27°♈39'48	2.47432 AU		-2990 Sep 27 j 18:51	0°♈	
	-2995 Sep 07 j 03:28	0°♈			-2990 Dec 05 j 08:30	0°♈	
				retrograde	-2989 Jan 01 j 14:35	3°♈59'53	
conjunction	-2995 Oct 11 j 05:55	24°♈59'05	0°18'36		-2989 Jan 26 j 17:21	30°♈	
minimum elong	-2995 Oct 11 j 07:01	25°♈01'07	0°18'36	opposition	-2989 Feb 07 j 23:30	25°♈42'00	4°55'32
	-2995 Oct 17 j 22:31	0°♈		greatest brilliancy	-2989 Feb 09 j 09:24	25°♈09'47	-1.6m
desc. node	-2995 Nov 07 j 14:26	15°♈41'05		min. Earth dist.	-2989 Feb 14 j 07:08	23°♈18'15	0.59583 AU
	-2995 Nov 26 j 04:16	0°♈		direct	-2989 Mar 20 j 15:26	15°♈55'44	
morning rise	-2995 Dec 08 j 23:39	9°♈57'28			-2989 May 12 j 03:18	0°♈	
	-2994 Jan 03 j 14:59	0°♈		desc. node	-2989 Jun 30 j 10:22	27°♈47'31	
	-2994 Feb 11 j 03:02	0°♈			-2989 Jul 03 j 20:30	0°♈	
	-2994 Mar 22 j 14:02	0°♈			-2989 Aug 16 j 03:57	0°♈	
	-2994 May 02 j 22:51	0°♈			-2989 Sep 25 j 03:48	0°♈	
	-2994 Jun 16 j 11:38	0°♈			-2989 Nov 02 j 22:19	0°♈	
	-2994 Aug 06 j 04:31	0°♈			-2989 Dec 11 j 19:23	0°♈	
asc. node	-2994 Sep 15 j 20:49	18°♈12'08			-2988 Jan 20 j 18:24	0°♈	
retrograde	-2994 Oct 20 j 06:24	24°♈40'24		evening set	-2988 Feb 18 j 20:02	21°♈04'05	
min. Earth dist.	-2994 Nov 28 j 01:16	15°♈20'40	0.66647 AU		-2988 Mar 02 j 10:45	0°♈	
opposition	-2994 Nov 29 j 07:04	14°♈50'41	2°39'03				
greatest brilliancy	-2994 Nov 29 j 01:44	14°♈56'03	-1.3m	conjunction	-2988 Apr 14 j 09:03	29°♈29'50	0°-13'-35
direct	-2993 Jan 08 j 07:31	5°♈13'15		minimum elong	-2988 Apr 14 j 09:43	29°♈30'57	0°13'35
	-2993 Mar 27 j 19:03	0°♈		behind sun begin	-2988 Apr 13 j 22:21	29°♈11'52	
	-2993 May 20 j 11:57	0°♈		behind sun end	-2988 Apr 14 j 21:05	29°♈50'02	
	-2993 Jul 06 j 14:38	0°♈			-2988 Apr 15 j 03:01	0°♈	
	-2993 Aug 18 j 22:27	0°♈		asc. node	-2988 May 07 j 17:13	15°♈01'23	
desc. node	-2993 Sep 25 j 13:14	27°♈41'47		max. Earth dist.	-2988 May 07 j 15:36	14°♈58'44	2.60264 AU
	-2993 Sep 28 j 14:25	0°♈			-2988 May 30 j 15:58	0°♈	
evening set	-2993 Oct 11 j 20:16	10°♈05'20		morning rise	-2988 Jun 04 j 11:26	3°♈06'31	
	-2993 Nov 06 j 13:00	0°♈			-2988 Jul 16 j 16:54	0°♈	
					-2988 Sep 03 j 00:34	0°♈	
conjunction	-2993 Dec 13 j 15:26	29°♈10'47	0°-50'-3		-2988 Oct 23 j 07:16	0°♈	
minimum elong	-2993 Dec 13 j 12:16	29°♈04'32	0°50'07		-2988 Dec 18 j 14:35	0°♈	
	-2993 Dec 14 j 16:24	0°♈		retrograde	-2987 Feb 20 j 23:23	18°♈22'25	
max. Earth dist.	-2993 Dec 24 j 11:44	7°♈43'31	2.37512 AU	opposition	-2987 Mar 26 j 23:23	11°♈42'21	2°53'09
	-2992 Jan 21 j 22:53	0°♈		greatest brilliancy	-2987 Mar 28 j 08:51	11°♈14'15	-2.2m
morning rise	-2992 Feb 20 j 06:21	22°♈29'46		min. Earth dist.	-2987 Apr 04 j 12:20	8°♈51'29	0.47461 AU
	-2992 Mar 01 j 05:28	0°♈		direct	-2987 May 03 j 06:52	3°♈33'16	
	-2992 Apr 11 j 06:15	0°♈		desc. node	-2987 May 17 j 09:33	4°♈52'32	
	-2992 May 24 j 16:45	0°♈			-2987 Jul 14 j 14:24	0°♈	
	-2992 Jul 10 j 06:44	0°♈			-2987 Aug 28 j 20:02	0°♈	

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-2987 Oct 09 j 01:03	0°♂	morning rise	-2982 Sep 25 j 16:26	24°♂00'57	
	-2987 Nov 18 j 13:55	0°♂		-2982 Oct 04 j 05:01	0°♂	
	-2987 Dec 29 j 21:13	0°♂		-2982 Nov 14 j 22:28	0°♂	
	-2986 Feb 10 j 16:21	0°♂		-2982 Dec 25 j 07:37	0°♂	
asc. node	-2986 Mar 25 j 15:18	28°♂57'47	desc. node	-2981 Jan 07 j 09:35	9°♂52'06	
	-2986 Mar 27 j 04:54	0°♂		-2981 Feb 02 j 22:26	0°♂	
evening set	-2986 Apr 07 j 09:08	7°♂22'01		-2981 Mar 14 j 14:55	0°♂	
	-2986 May 12 j 04:46	0°♂		-2981 Apr 24 j 16:19	0°♂	
				-2981 Jun 08 j 16:33	0°♂	
conjunction	-2986 May 26 j 20:32	9°♂25'06 0°33'52		-2981 Aug 11 j 23:35	0°♂	
minimum elong	-2986 May 26 j 19:23	9°♂23'15 0°33'56	retrograde	-2981 Aug 31 j 09:34	2°♂27'35	
max. Earth dist.	-2986 Jun 02 j 09:03	13°♂35'44 2.66229 AU		-2981 Sep 18 j 20:07	30°♂♂	
	-2986 Jun 28 j 01:54	0°♂	min. Earth dist.	-2981 Oct 03 j 04:40	25°♂12'10 0.56748 AU	
morning rise	-2986 Jul 12 j 07:01	9°♂03'04	opposition	-2981 Oct 09 j 11:09	22°♂44'59 -1°-36'-42	
	-2986 Aug 14 j 04:38	0°♂	greatest brilliancy	-2981 Oct 08 j 22:45	22°♂57'06 -1.8m	
	-2986 Sep 30 j 04:18	0°♂	direct	-2981 Nov 14 j 16:56	14°♂29'33	
	-2986 Nov 16 j 04:29	0°♂	asc. node	-2981 Nov 15 j 11:51	14°♂29'48	
	-2985 Jan 03 j 01:19	0°♂		-2980 Jan 11 j 18:05	0°♂	
	-2985 Feb 23 j 16:18	0°♂		-2980 Mar 10 j 07:33	0°♂	
desc. node	-2985 Apr 04 j 10:43	17°♂57'36		-2980 Apr 30 j 14:59	0°♂	
retrograde	-2985 May 06 j 16:22	23°♂55'05		-2980 Jun 17 j 17:54	0°♂	
opposition	-2985 Jun 06 j 00:43	18°♂53'59 -4°-20'-56	evening set	-2980 Aug 02 j 05:25	29°♂59'41	
greatest brilliancy	-2985 Jun 06 j 03:58	18°♂51'50 -2.9m		-2980 Aug 02 j 05:37	0°♂	
min. Earth dist.	-2985 Jun 07 j 01:48	18°♂37'22 0.37751 AU	max. Earth dist.	-2980 Aug 18 j 16:16	11°♂16'03 2.52268 AU	
direct	-2985 Jul 06 j 09:04	13°♂46'38		-2980 Sep 14 j 07:00	0°♂	
	-2985 Aug 30 j 02:40	0°♂				
	-2985 Oct 20 j 08:31	0°♂	conjunction	-2980 Sep 21 j 05:20	4°♂58'42 0°40'34	
	-2985 Dec 05 j 10:56	0°♂	minimum elong	-2980 Sep 21 j 07:00	5°♂01'44 0°40'35	
	-2984 Jan 20 j 03:03	0°♂		-2980 Oct 25 j 06:26	0°♂	
asc. node	-2984 Feb 10 j 13:04	13°♂55'51	morning rise	-2980 Nov 14 j 04:43	15°♂02'15	
	-2984 Mar 06 j 11:20	0°♂	desc. node	-2980 Nov 24 j 09:09	22°♂48'59	
	-2984 Apr 22 j 13:02	0°♂		-2980 Dec 03 j 17:29	0°♂	
evening set	-2984 May 16 j 22:45	15°♂28'11		-2979 Jan 11 j 09:13	0°♂	
	-2984 Jun 08 j 20:06	0°♂		-2979 Feb 19 j 01:25	0°♂	
max. Earth dist.	-2984 Jun 24 j 22:44	10°♂16'10 2.66756 AU		-2979 Mar 30 j 16:44	0°♂	
				-2979 May 11 j 10:04	0°♂	
conjunction	-2984 Jul 02 j 16:27	15°♂13'10 1°04'06		-2979 Jun 26 j 00:45	0°♂	
minimum elong	-2984 Jul 02 j 15:29	15°♂11'37 1°04'11		-2979 Aug 21 j 02:27	0°♂	
	-2984 Jul 25 j 15:25	0°♂	asc. node	-2979 Oct 02 j 11:08	11°♂15'32	
morning rise	-2984 Aug 16 j 17:28	14°♂22'43	retrograde	-2979 Oct 06 j 18:24	11°♂22'50	
	-2984 Sep 09 j 09:47	0°♂	min. Earth dist.	-2979 Nov 13 j 02:04	2°♂32'09 0.65036 AU	
	-2984 Oct 23 j 22:06	0°♂	opposition	-2979 Nov 15 j 19:21	1°♂26'26 1°41'02	
	-2984 Dec 06 j 06:21	0°♂	greatest brilliancy	-2979 Nov 15 j 12:47	1°♂33'02 -1.4m	
	-2983 Jan 17 j 18:15	0°♂		-2979 Nov 19 j 09:59	30°♂♂	
desc. node	-2983 Feb 19 j 10:21	23°♂11'55	direct	-2979 Dec 25 j 00:38	22°♂05'26	
	-2983 Mar 01 j 01:30	0°♂		-2978 Feb 02 j 19:13	0°♂	
	-2983 Apr 13 j 21:24	0°♂		-2978 Apr 07 j 15:55	0°♂	
	-2983 Jun 05 j 16:15	0°♂		-2978 May 28 j 17:52	0°♂	
retrograde	-2983 Jul 15 j 02:42	9°♂38'21		-2978 Jul 14 j 03:18	0°♂	
min. Earth dist.	-2983 Aug 11 j 12:34	4°♂33'31 0.44347 AU		-2978 Aug 26 j 06:49	0°♂	
greatest brilliancy	-2983 Aug 17 j 13:37	2°♂32'37 -2.4m	evening set	-2978 Sep 19 j 05:36	17°♂28'27	
opposition	-2983 Aug 19 j 12:55	1°♂52'46 -5°-44'-1		-2978 Oct 05 j 23:20	0°♂	
	-2983 Aug 25 j 07:18	30°♂♂	desc. node	-2978 Oct 12 j 07:08	4°♂47'33	
direct	-2983 Sep 20 j 14:08	25°♂33'06	max. Earth dist.	-2978 Oct 13 j 10:39	5°♂39'52 2.39960 AU	
	-2983 Oct 18 j 02:35	0°♂		-2978 Nov 14 j 00:05	0°♂	
	-2983 Dec 22 j 12:07	0°♂				
asc. node	-2983 Dec 28 j 12:27	3°♂20'54	conjunction	-2978 Nov 16 j 16:54	2°♂06'23 0°-24'-25	
	-2982 Feb 12 j 07:46	0°♂	minimum elong	-2978 Nov 16 j 15:02	2°♂02'44 0°24'27	
	-2982 Apr 02 j 21:20	0°♂		-2978 Dec 22 j 05:37	0°♂	
	-2982 May 21 j 07:38	0°♂	morning rise	-2977 Jan 22 j 06:14	24°♂19'44	
evening set	-2982 Jun 24 j 01:28	21°♂23'56		-2977 Jan 29 j 13:11	0°♂	
	-2982 Jul 07 j 09:32	0°♂		-2977 Mar 09 j 19:54	0°♂	
max. Earth dist.	-2982 Jul 19 j 19:08	8°♂04'58 2.61947 AU		-2977 Apr 19 j 21:23	0°♂	
				-2977 Jun 02 j 12:51	0°♂	
conjunction	-2982 Aug 09 j 18:12	21°♂56'51 1°09'16		-2977 Jul 19 j 23:59	0°♂	
minimum elong	-2982 Aug 09 j 18:45	21°♂57'45 1°09'20	asc. node	-2977 Aug 20 j 11:22	17°♂51'04	
	-2982 Aug 21 j 17:52	0°♂		-2977 Sep 14 j 00:32	0°♂	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 43

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

retrograde	-2977 Nov 10 j 11:00	15° Π 24'53		evening set	-2971 Mar 20 j 19:45	20° X 55'40	
opposition	-2977 Dec 20 j 03:37	5° Π 53'03	3°51'37		-2971 Apr 03 j 08:25	0° Υ	
greatest brilliancy	-2977 Dec 20 j 06:12	5° Π 50'28	-1.2m	asc. node	-2971 Apr 11 j 07:10	5° Υ 16'52	
min. Earth dist.	-2977 Dec 21 j 05:14	5° Π 27'27	0.67230 AU				
	-2976 Jan 05 j 01:03	30° R 8		conjunction	-2971 May 11 j 04:48	24° Υ 52'52	0°17'00
direct	-2976 Jan 30 j 00:45	25° X 58'19		minimum elong	-2971 May 11 j 04:06	24° Υ 51'44	0°17'01
	-2976 Feb 26 j 07:57	0° Π			-2971 May 19 j 02:26	0° X	
	-2976 May 03 j 21:58	0° S		max. Earth dist.	-2971 May 23 j 18:28	3° X 00'53	2.64546 AU
	-2976 Jun 22 j 08:36	0° Ω		morning rise	-2971 Jun 28 j 00:18	25° X 34'47	
	-2976 Aug 05 j 09:43	0° M			-2971 Jul 04 j 23:11	0° Π	
desc. node	-2976 Aug 29 j 04:57	17° M 15'01			-2971 Aug 21 j 09:40	0° S	
	-2976 Sep 15 j 06:39	0° $\underline{\text{A}}$			-2971 Oct 08 j 06:38	0° Ω	
	-2976 Oct 24 j 05:52	0° M			-2971 Nov 26 j 06:23	0° M	
evening set	-2976 Nov 20 j 05:30	21° M 12'35			-2970 Jan 18 j 04:56	0° $\underline{\text{A}}$	
	-2976 Dec 01 j 09:02	0° X		retrograde	-2970 Apr 04 j 20:50	25° $\underline{\text{A}}$ 12'10	
	-2975 Jan 08 j 15:50	0° Z		desc. node	-2970 Apr 21 j 02:28	23° $\underline{\text{A}}$ 34'34	
				opposition	-2970 May 06 j 02:24	19° $\underline{\text{A}}$ 48'07	-1°-2'-24
conjunction	-2975 Jan 25 j 07:42	12° Z 50'34	-1°-7'00	greatest brilliancy	-2970 May 06 j 10:04	19° $\underline{\text{A}}$ 42'35	-2.7m
minimum elong	-2975 Jan 25 j 07:52	12° Z 50'52	1°07'06	min. Earth dist.	-2970 May 11 j 20:37	18° $\underline{\text{A}}$ 08'44	0.40142 AU
	-2975 Feb 16 j 23:30	0° \approx		direct	-2970 Jun 08 j 03:48	13° $\underline{\text{A}}$ 38'32	
max. Earth dist.	-2975 Mar 15 j 14:26	19° \approx 37'15	2.44041 AU		-2970 Aug 01 j 00:59	0° M	
	-2975 Mar 30 j 00:57	0° X			-2970 Sep 19 j 08:28	0° X	
morning rise	-2975 Mar 31 j 00:55	0° X 42'40			-2970 Nov 02 j 04:52	0° Z	
	-2975 May 12 j 07:31	0° Υ			-2970 Dec 15 j 11:44	0° \approx	
	-2975 Jun 27 j 02:54	0° X			-2969 Jan 28 j 15:07	0° X	
asc. node	-2975 Jul 07 j 11:26	6° X 32'05		asc. node	-2969 Feb 27 j 05:26	19° X 38'30	
	-2975 Aug 15 j 02:49	0° Π			-2969 Mar 15 j 01:20	0° Υ	
	-2975 Oct 09 j 17:58	0° S			-2969 Apr 30 j 14:22	0° X	
retrograde	-2975 Dec 16 j 09:32	19° S 41'58		evening set	-2969 May 02 j 17:18	1° X 21'25	
opposition	-2974 Jan 23 j 16:01	10° S 57'46	4°55'08		-2969 Jun 16 j 15:56	0° Π	
greatest brilliancy	-2974 Jan 24 j 16:51	10° S 33'41	-1.4m	max. Earth dist.	-2969 Jun 16 j 23:33	0° Π 12'09	2.67211 AU
min. Earth dist.	-2974 Jan 28 j 13:26	9° S 03'57	0.62980 AU				
direct	-2974 Mar 05 j 18:35	0° S 59'47		conjunction	-2969 Jun 19 j 04:22	1° Π 36'17	0°54'56
	-2974 May 27 j 06:08	0° Ω		minimum elong	-2969 Jun 19 j 03:07	1° Π 34'18	0°55'01
	-2974 Jul 14 j 00:37	0° M			-2969 Aug 02 j 12:36	0° S	
desc. node	-2974 Jul 17 j 03:41	2° M 08'00		morning rise	-2969 Aug 03 j 09:42	0° S 33'58	
	-2974 Aug 25 j 02:40	0° $\underline{\text{A}}$			-2969 Sep 17 j 15:50	0° Ω	
	-2974 Oct 03 j 14:00	0° M			-2969 Nov 01 j 21:31	0° M	
	-2974 Nov 11 j 00:45	0° X			-2969 Dec 16 j 09:41	0° $\underline{\text{A}}$	
	-2974 Dec 19 j 15:02	0° Z			-2968 Jan 29 j 15:45	0° M	
evening set	-2973 Jan 27 j 04:32	29° Z 10'19		desc. node	-2968 Mar 08 j 04:19	25° M 38'28	
	-2973 Jan 28 j 07:20	0° \approx			-2968 Mar 14 j 22:12	0° X	
	-2973 Mar 10 j 17:27	0° X			-2968 May 05 j 23:47	0° Z	
				retrograde	-2968 Jun 21 j 01:52	12° Z 29'52	
conjunction	-2973 Mar 27 j 03:56	11° X 30'51	0°-33'-43	min. Earth dist.	-2968 Jul 17 j 17:29	8° Z 01'23	0.40023 AU
minimum elong	-2973 Mar 27 j 05:40	11° X 33'52	0°33'45	greatest brilliancy	-2968 Jul 22 j 07:34	6° Z 39'46	-2.7m
	-2973 Apr 23 j 04:46	0° Υ		opposition	-2968 Jul 24 j 01:56	6° Z 08'09	-6°-38'-18
max. Earth dist.	-2973 Apr 27 j 04:55	2° Υ 41'38	2.56513 AU	direct	-2968 Aug 23 j 08:58	0° Z 42'09	
morning rise	-2973 May 20 j 05:21	17° Υ 58'31			-2968 Nov 13 j 05:29	0° \approx	
asc. node	-2973 May 25 j 09:20	21° Υ 21'33			-2967 Jan 03 j 08:55	0° X	
	-2973 Jun 07 j 16:23	0° X		asc. node	-2967 Jan 14 j 03:31	6° X 34'37	
	-2973 Jul 24 j 23:16	0° Π			-2967 Feb 21 j 03:25	0° Υ	
	-2973 Sep 12 j 05:17	0° S			-2967 Apr 10 j 10:54	0° X	
	-2973 Nov 04 j 09:56	0° Ω			-2967 May 28 j 07:52	0° Π	
retrograde	-2972 Jan 30 j 18:06	29° Ω 35'49		evening set	-2967 Jun 09 j 06:43	7° Π 34'17	
opposition	-2972 Mar 06 j 07:07	22° Ω 11'02	4°09'18	max. Earth dist.	-2967 Jul 09 j 18:35	27° Π 06'25	2.64462 AU
greatest brilliancy	-2972 Mar 08 j 00:02	21° Ω 34'18	-1.9m		-2967 Jul 14 j 05:48	0° S	
min. Earth dist.	-2972 Mar 14 j 10:01	19° Ω 17'12	0.52645 AU				
direct	-2972 Apr 14 j 09:59	13° Ω 08'44		conjunction	-2967 Jul 25 j 15:34	7° S 25'40	1°10'44
desc. node	-2972 Jun 03 j 02:44	26° Ω 40'23		minimum elong	-2967 Jul 25 j 15:25	7° S 25'26	1°10'50
	-2972 Jun 09 j 19:51	0° M			-2967 Aug 28 j 16:54	0° Ω	
	-2972 Jul 29 j 02:25	0° $\underline{\text{A}}$		morning rise	-2967 Sep 09 j 08:28	7° Ω 52'07	
	-2972 Sep 08 j 23:55	0° M			-2967 Oct 11 j 12:05	0° M	
	-2972 Oct 18 j 19:00	0° X			-2967 Nov 22 j 17:47	0° $\underline{\text{A}}$	
	-2972 Nov 27 j 10:03	0° Z			-2966 Jan 02 j 17:45	0° M	
	-2971 Jan 07 j 00:22	0° \approx		desc. node	-2966 Jan 24 j 03:37	15° M 54'19	
	-2971 Feb 18 j 06:01	0° X			-2966 Feb 12 j 01:15	0° X	

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-2966 Mar 24 j 14:12	0°☾					-2961 Mar 19 j 04:30	0°♊		
	-2966 May 06 j 03:56	0°♊					-2961 May 14 j 16:26	0°♋		
	-2966 Jun 25 j 09:16	0°♋					-2961 Jul 01 j 12:13	0°♌		
retrograde	-2966 Aug 14 j 18:14	14°♋26'55					-2961 Aug 14 j 02:07	0°♍		
min. Earth dist.	-2966 Sep 14 j 10:36	7°♋59'50	0.52100 AU		desc. node		-2961 Sep 15 j 22:31	24°♍03'09		
opposition	-2966 Sep 21 j 20:21	5°♋12'10	-3°-12'-13				-2961 Sep 23 j 20:15	0°♎		
greatest brilliancy	-2966 Sep 20 j 16:52	5°♋38'11	-2.0m		evening set		-2961 Oct 25 j 17:54	24°♎29'55		
	-2966 Oct 07 j 17:15	30°♌					-2961 Nov 01 j 19:10	0°♏		
direct	-2966 Oct 26 j 13:13	27°♌35'11					-2961 Dec 09 j 22:20	0°♐		
	-2966 Nov 15 j 18:38	0°♋								
asc. node	-2966 Dec 02 j 02:27	4°♋44'29			conjunction		-2961 Dec 29 j 10:22	15°♐21'11	-1°00'-13	
	-2965 Jan 26 j 02:41	0°♌			minimum elong		-2961 Dec 29 j 07:47	15°♐16'06	1°00'19	
	-2965 Mar 20 j 08:59	0°♌					-2960 Jan 17 j 04:21	0°☾		
	-2965 May 09 j 05:15	0°♊			max. Earth dist.		-2960 Feb 10 j 02:53	18°☾25'37	2.39084 AU	
	-2965 Jun 25 j 19:46	0°♋					-2960 Feb 25 j 10:16	0°♊		
evening set	-2965 Jul 18 j 02:03	14°♋31'47			morning rise		-2960 Mar 06 j 12:05	7°♊30'41		
max. Earth dist.	-2965 Aug 06 j 12:56	27°♋31'01	2.56572 AU				-2960 Apr 06 j 10:03	0°♋		
	-2965 Aug 10 j 05:01	0°♌					-2960 May 19 j 17:20	0°♌		
							-2960 Jul 04 j 21:43	0°♌		
conjunction	-2965 Sep 04 j 06:48	17°♌14'30	0°56'19		asc. node		-2960 Jul 24 j 02:17	11°♌48'25		
minimum elong	-2965 Sep 04 j 08:18	17°♌17'07	0°56'21				-2960 Aug 24 j 09:05	0°♊		
	-2965 Sep 22 j 09:14	0°♍					-2960 Oct 27 j 22:02	0°♋		
morning rise	-2965 Oct 24 j 15:56	23°♍22'56			retrograde		-2960 Dec 01 j 10:55	6°♋13'33		
	-2965 Nov 02 j 14:40	0°♎					-2959 Jan 01 j 22:09	30°♌		
desc. node	-2965 Dec 12 j 01:50	29°♎46'26			opposition		-2959 Jan 09 j 09:58	27°♌07'51	4°39'35	
	-2965 Dec 12 j 08:56	0°♏			greatest brilliancy		-2959 Jan 10 j 01:20	26°♌52'43	-1.3m	
	-2964 Jan 20 j 07:56	0°♐			min. Earth dist.		-2959 Jan 12 j 19:41	25°♌47'26	0.65407 AU	
	-2964 Feb 28 j 06:59	0°☾			direct		-2959 Feb 19 j 15:10	17°♌06'41		
	-2964 Apr 08 j 06:16	0°♊					-2959 Apr 12 j 04:17	0°♋		
	-2964 May 20 j 15:34	0°♋					-2959 Jun 07 j 08:01	0°♌		
	-2964 Jul 07 j 09:52	0°♌					-2959 Jul 22 j 23:48	0°♍		
retrograde	-2964 Sep 22 j 20:27	27°♌20'32			desc. node		-2959 Aug 02 j 20:09	7°♍38'11		
asc. node	-2964 Oct 19 j 02:47	22°♌36'07					-2959 Sep 02 j 10:09	0°♎		
min. Earth dist.	-2964 Oct 28 j 12:59	19°♌03'20	0.62450 AU				-2959 Oct 11 j 14:41	0°♏		
opposition	-2964 Nov 01 j 17:10	17°♌22'58	0°32'52				-2959 Nov 18 j 21:03	0°♐		
greatest brilliancy	-2964 Nov 01 j 13:50	17°♌26'18	-1.5m				-2959 Dec 27 j 07:08	0°☾		
direct	-2964 Dec 09 j 22:13	8°♌23'15			evening set		-2958 Jan 01 j 22:32	4°☾21'09		
	-2963 Feb 19 j 22:30	0°♌					-2958 Feb 04 j 18:37	0°♊		
	-2963 Apr 16 j 22:49	0°♊								
	-2963 Jun 05 j 12:03	0°♋			conjunction		-2958 Mar 05 j 14:59	21°♊08'59	0°-51'-59	
	-2963 Jul 21 j 10:33	0°♌			minimum elong		-2958 Mar 05 j 17:21	21°♊13'16	0°52'02	
evening set	-2963 Aug 30 j 03:31	27°♌35'47					-2958 Mar 17 j 23:51	0°♋		
	-2963 Sep 02 j 12:07	0°♍			max. Earth dist.		-2958 Apr 13 j 22:12	18°♋49'39	2.52021 AU	
max. Earth dist.	-2963 Sep 15 j 01:24	9°♍04'50	2.44684 AU				-2958 Apr 30 j 07:29	0°♌		
	-2963 Oct 13 j 06:34	0°♎			morning rise		-2958 May 02 j 10:54	1°♌26'44		
					asc. node		-2958 Jun 11 j 01:22	27°♌34'35		
conjunction	-2963 Oct 23 j 14:38	7°♎49'27	0°03'47				-2958 Jun 14 j 19:30	0°♌		
minimum elong	-2963 Oct 23 j 14:53	7°♎49'56	0°03'47				-2958 Aug 01 j 12:23	0°♊		
behind sun begin	-2963 Oct 22 j 14:56	7°♎04'25					-2958 Sep 21 j 05:30	0°♋		
behind sun end	-2963 Oct 24 j 14:51	8°♎35'30					-2958 Nov 19 j 11:43	0°♌		
desc. node	-2963 Oct 29 j 00:18	11°♎56'33			retrograde		-2957 Jan 11 j 12:43	13°♌06'06		
	-2963 Nov 21 j 10:24	0°♏			opposition		-2957 Feb 17 j 07:52	5°♌05'02	4°46'20	
morning rise	-2963 Dec 24 j 07:30	25°♏42'11			greatest brilliancy		-2957 Feb 18 j 21:43	4°♌29'37	-1.7m	
	-2963 Dec 29 j 18:58	0°♐			min. Earth dist.		-2957 Feb 24 j 09:10	2°♌27'19	0.57324 AU	
	-2962 Feb 06 j 04:49	0°☾					-2957 Mar 03 j 11:03	30°♌		
	-2962 Mar 17 j 13:14	0°♊			direct		-2957 Mar 29 j 14:17	25°♋30'03		
	-2962 Apr 27 j 17:53	0°♋					-2957 Apr 26 j 04:46	0°♌		
	-2962 Jun 10 j 19:34	0°♌			desc. node		-2957 Jun 20 j 19:46	26°♌32'48		
	-2962 Jul 29 j 20:42	0°♌					-2957 Jun 26 j 11:32	0°♍		
asc. node	-2962 Sep 06 j 03:11	19°♌23'33					-2957 Aug 10 j 02:18	0°♎		
	-2962 Oct 06 j 22:34	0°♊					-2957 Sep 19 j 13:49	0°♏		
retrograde	-2962 Oct 27 j 23:36	2°♊34'37					-2957 Oct 28 j 14:52	0°♐		
	-2962 Nov 16 j 14:17	30°♌					-2957 Dec 06 j 16:42	0°☾		
opposition	-2962 Dec 06 j 22:27	22°♌50'22	3°08'29				-2956 Jan 15 j 19:39	0°♊		
greatest brilliancy	-2962 Dec 06 j 19:11	22°♌53'38	-1.3m				-2956 Feb 26 j 15:32	0°♋		
min. Earth dist.	-2962 Dec 06 j 12:06	23°♌00'46	0.67123 AU		evening set		-2956 Mar 01 j 16:11	2°♋49'00		
direct	-2961 Jan 16 j 07:38	13°♌05'47					-2956 Apr 10 j 10:15	0°♌		

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 45

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

conjunction	-2956 Apr 24 j 12:52	9°Υ24'05	0°-2'00		-2951 Feb 22 j 02:06	0°𐌶	
minimum elong	-2956 Apr 24 j 12:57	9°Υ24'13	0°02'01		-2951 Apr 05 j 05:11	0°𐌶	
behind sun begin	-2956 Apr 23 j 15:41	8°Υ49'02			-2951 May 21 j 13:41	0°≈	
behind sun end	-2956 Apr 25 j 10:12	9°Υ59'24		retrograde	-2951 Jul 27 j 00:27	23°≈32'29	
asc. node	-2956 Apr 27 j 22:56	11°Υ39'49		min. Earth dist.	-2951 Aug 24 j 12:53	17°≈58'07	0.47102 AU
max. Earth dist.	-2956 May 13 j 19:18	22°Υ04'16	2.62029 AU	greatest brilliancy	-2951 Aug 30 j 19:52	15°≈45'00	-2.3m
	-2956 May 26 j 00:04	0°𐌶		opposition	-2951 Sep 01 j 14:00	15°≈07'31	-4°-52'-12
morning rise	-2956 Jun 13 j 06:29	11°𐌶45'54		direct	-2951 Oct 04 j 14:56	8°≈17'48	
	-2956 Jul 11 j 22:20	0°𐌶			-2951 Dec 13 j 03:12	0°𐌶	
	-2956 Aug 28 j 20:32	0°𐌶		asc. node	-2951 Dec 18 j 18:39	2°𐌶50'26	
	-2956 Oct 17 j 01:14	0°𐌶			-2950 Feb 06 j 02:02	0°Υ	
	-2956 Dec 08 j 14:08	0°𐌶			-2950 Mar 28 j 15:58	0°𐌶	
	-2955 Feb 23 j 19:24	0°𐌶			-2950 May 16 j 12:36	0°𐌶	
retrograde	-2955 Mar 07 j 05:24	0°𐌶45'58		evening set	-2950 Jul 02 j 16:22	29°𐌶56'15	
	-2955 Mar 18 j 07:10	30°𐌶𐌶			-2950 Jul 02 j 18:41	0°𐌶	
opposition	-2955 Apr 09 j 04:24	24°𐌶33'28	1°45'34	max. Earth dist.	-2950 Jul 26 j 00:16	15°𐌶11'45	2.60243 AU
greatest brilliancy	-2955 Apr 10 j 01:59	24°𐌶16'14	-2.4m		-2950 Aug 17 j 03:39	0°𐌶	
min. Earth dist.	-2955 Apr 17 j 08:51	21°𐌶57'10	0.44626 AU				
desc. node	-2955 May 07 j 20:12	17°𐌶25'12		conjunction	-2950 Aug 18 j 18:06	1°𐌶05'02	1°06'06
direct	-2955 May 15 j 05:05	17°𐌶02'44		minimum elong	-2950 Aug 18 j 19:02	1°𐌶06'37	1°06'10
	-2955 Jul 01 j 08:40	0°𐌶			-2950 Sep 29 j 12:36	0°𐌶	
	-2955 Aug 20 j 16:52	0°𐌶		morning rise	-2950 Oct 05 j 15:39	4°𐌶20'47	
	-2955 Oct 02 j 08:45	0°𐌶			-2950 Nov 10 j 01:58	0°𐌶	
	-2955 Nov 12 j 16:03	0°𐌶			-2950 Dec 20 j 05:31	0°𐌶	
	-2955 Dec 24 j 11:16	0°≈		desc. node	-2950 Dec 28 j 19:16	6°𐌶30'12	
	-2954 Feb 05 j 15:01	0°𐌶			-2949 Jan 28 j 13:52	0°𐌶	
asc. node	-2954 Mar 15 j 20:09	25°𐌶40'21			-2949 Mar 08 j 22:33	0°𐌶	
	-2954 Mar 22 j 09:25	0°Υ			-2949 Apr 18 j 10:56	0°≈	
evening set	-2954 Apr 16 j 21:32	16°Υ40'09			-2949 Jun 01 j 02:10	0°𐌶	
	-2954 May 07 j 13:01	0°𐌶			-2949 Jul 24 j 05:46	0°Υ	
				retrograde	-2949 Sep 09 j 05:20	12°Υ12'50	
conjunction	-2954 Jun 04 j 12:26	17°𐌶55'02	0°42'31	min. Earth dist.	-2949 Oct 13 j 02:37	4°Υ34'00	0.59001 AU
minimum elong	-2954 Jun 04 j 11:10	17°𐌶53'01	0°42'34	opposition	-2949 Oct 18 j 16:19	2°Υ21'42	0°-46'-2
max. Earth dist.	-2954 Jun 07 j 19:48	20°𐌶01'42	2.66820 AU	greatest brilliancy	-2949 Oct 18 j 10:57	2°Υ27'01	-1.7m
	-2954 Jun 23 j 11:03	0°𐌶			-2949 Oct 24 j 19:38	30°𐌶𐌶	
morning rise	-2954 Jul 20 j 09:04	17°𐌶09'51		asc. node	-2949 Nov 05 j 17:40	26°𐌶12'56	
	-2954 Aug 09 j 11:00	0°𐌶		direct	-2949 Nov 24 j 16:37	23°𐌶48'40	
	-2954 Sep 25 j 02:13	0°𐌶			-2949 Dec 28 j 22:28	0°Υ	
	-2954 Nov 10 j 08:05	0°𐌶			-2948 Mar 03 j 18:17	0°𐌶	
	-2954 Dec 26 j 15:44	0°𐌶			-2948 Apr 25 j 08:29	0°𐌶	
	-2953 Feb 12 j 07:46	0°𐌶			-2948 Jun 12 j 22:14	0°𐌶	
desc. node	-2953 Mar 25 j 20:15	23°𐌶34'10			-2948 Jul 28 j 13:51	0°𐌶	
	-2953 Apr 08 j 06:12	0°𐌶		evening set	-2948 Aug 11 j 23:26	9°𐌶50'39	
retrograde	-2953 May 24 j 10:46	11°𐌶47'47		max. Earth dist.	-2948 Aug 27 j 10:18	20°𐌶36'53	2.49643 AU
min. Earth dist.	-2953 Jun 22 j 06:01	7°𐌶05'31	0.37740 AU		-2948 Sep 09 j 15:32	0°𐌶	
opposition	-2953 Jun 24 j 05:17	6°𐌶33'46	-5°-47'-35				
greatest brilliancy	-2953 Jun 23 j 16:04	6°𐌶42'39	-2.9m	conjunction	-2948 Oct 02 j 07:32	16°𐌶26'55	0°28'42
direct	-2953 Jul 24 j 01:58	1°𐌶35'17		minimum elong	-2948 Oct 02 j 08:59	16°𐌶29'36	0°28'42
	-2953 Oct 10 j 03:04	0°𐌶			-2948 Oct 20 j 13:33	0°𐌶	
	-2953 Nov 28 j 08:46	0°≈		desc. node	-2948 Nov 14 j 17:23	19°𐌶04'24	
	-2952 Jan 14 j 07:38	0°𐌶		morning rise	-2948 Nov 27 j 18:54	29°𐌶07'20	
asc. node	-2952 Jan 31 j 19:06	11°𐌶11'20			-2948 Nov 28 j 22:10	0°𐌶	
	-2952 Mar 01 j 07:37	0°Υ			-2947 Jan 06 j 11:14	0°𐌶	
	-2952 Apr 17 j 18:00	0°𐌶			-2947 Feb 14 j 00:47	0°𐌶	
evening set	-2952 May 25 j 12:22	23°𐌶51'02			-2947 Mar 25 j 12:32	0°≈	
	-2952 Jun 04 j 05:14	0°𐌶			-2947 May 05 j 23:06	0°𐌶	
max. Earth dist.	-2952 Jun 30 j 08:56	16°𐌶40'33	2.66169 AU		-2947 Jun 19 j 18:49	0°Υ	
					-2947 Aug 10 j 22:57	0°𐌶	
conjunction	-2952 Jul 11 j 00:08	23°𐌶30'26	1°07'43	asc. node	-2947 Sep 22 j 18:05	16°𐌶41'27	
minimum elong	-2952 Jul 10 j 23:26	23°𐌶29'17	1°07'49	retrograde	-2947 Oct 14 j 12:38	19°𐌶30'09	
	-2952 Jul 21 j 01:20	0°𐌶		min. Earth dist.	-2947 Nov 21 j 16:30	10°𐌶23'10	0.66046 AU
morning rise	-2952 Aug 25 j 03:07	22°𐌶57'57		opposition	-2947 Nov 23 j 14:32	9°𐌶36'50	2°15'58
	-2952 Sep 04 j 17:06	0°𐌶		greatest brilliancy	-2947 Nov 23 j 08:07	9°𐌶43'18	-1.3m
	-2952 Oct 18 j 22:46	0°𐌶		direct	-2946 Jan 02 j 07:31	0°𐌶06'17	
	-2952 Nov 30 j 20:24	0°𐌶			-2946 Mar 31 j 21:01	0°𐌶	
	-2951 Jan 11 j 16:52	0°𐌶			-2946 May 23 j 09:38	0°𐌶	
desc. node	-2951 Feb 09 j 19:59	21°𐌶07'14			-2946 Jul 09 j 06:04	0°𐌶	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 46

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-2946 Aug 21 j 13:07	0°♎					-2941 Jun 02 j 23:13	0°♎			
evening set	-2946 Oct 01 j 16:44	0°♎19'41					-2941 Jul 20 j 01:25	0°♎			
	-2946 Oct 01 j 06:19	0°♎					-2941 Sep 06 j 17:02	0°♎			
desc. node	-2946 Oct 02 j 15:52	1°♎03'26					-2941 Oct 27 j 23:47	0°♎			
	-2946 Nov 09 j 06:15	0°♎					-2941 Dec 27 j 22:21	0°♎			
max. Earth dist.	-2946 Nov 11 j 01:55	1°♎25'14	2.37974 AU		retrograde		-2940 Feb 11 j 20:53	10°♎20'41			
					opposition		-2940 Mar 17 j 14:49	3°♎19'40	3°31'13		
conjunction	-2946 Dec 01 j 15:14	17°♎32'49	0°-39'-49		greatest brilliancy		-2940 Mar 19 j 05:17	2°♎46'19	-2.1m		
minimum elong	-2946 Dec 01 j 12:21	17°♎27'10	0°39'52		min. Earth dist.		-2940 Mar 26 j 02:44	0°♎23'57	0.49813 AU		
	-2946 Dec 17 j 10:36	0°♎					-2940 Mar 27 j 07:34	30°♎♎			
morning rise	-2945 Jan 24 j 17:10	0°♎			direct		-2940 Apr 24 j 20:33	24°♎43'56			
	-2945 Feb 07 j 19:58	10°♎54'48			desc. node		-2940 May 24 j 12:10	0°♎09'36			
	-2945 Mar 04 j 22:50	0°♎					-2940 May 24 j 00:49	0°♎			
	-2945 Apr 14 j 22:34	0°♎					-2940 Jul 20 j 22:46	0°♎			
	-2945 May 28 j 09:17	0°♎					-2940 Sep 02 j 09:40	0°♎			
	-2945 Jul 14 j 05:01	0°♎					-2940 Oct 12 j 21:06	0°♎			
asc. node	-2945 Aug 10 j 18:15	16°♎15'06					-2940 Nov 21 j 22:39	0°♎			
	-2945 Sep 05 j 07:53	0°♎					-2939 Jan 01 j 20:40	0°♎			
retrograde	-2945 Nov 18 j 07:35	23°♎12'38					-2939 Feb 13 j 08:13	0°♎			
opposition	-2945 Dec 27 j 19:14	13°♎49'04	4°12'06				-2939 Mar 29 j 14:49	0°♎			
greatest brilliancy	-2945 Dec 28 j 01:55	13°♎42'25	-1.3m		evening set		-2939 Mar 31 j 00:04	0°♎55'14			
min. Earth dist.	-2945 Dec 29 j 16:37	13°♎03'56	0.66874 AU		asc. node		-2939 Apr 01 j 13:19	1°♎57'03			
direct	-2944 Feb 06 j 20:56	3°♎50'46					-2939 May 14 j 11:03	0°♎			
	-2944 Apr 26 j 16:32	0°♎									
	-2944 Jun 16 j 18:59	0°♎			conjunction		-2939 May 20 j 06:27	3°♎44'47	0°27'05		
	-2944 Jul 31 j 07:53	0°♎			minimum elong		-2939 May 20 j 05:27	3°♎43'10	0°27'07		
desc. node	-2944 Aug 19 j 14:52	13°♎51'08			max. Earth dist.		-2939 May 29 j 09:15	9°♎36'34	2.65574 AU		
	-2944 Sep 10 j 09:20	0°♎					-2939 Jun 30 j 07:15	0°♎			
	-2944 Oct 19 j 10:07	0°♎			morning rise		-2939 Jul 06 j 06:10	3°♎47'18			
	-2944 Nov 26 j 13:49	0°♎					-2939 Aug 16 j 13:02	0°♎			
evening set	-2944 Dec 05 j 17:46	7°♎13'00					-2939 Oct 02 j 21:14	0°♎			
greatest brilliancy	-2944 Dec 16 j 21:24	15°♎58'35	1.2m				-2939 Nov 19 j 15:24	0°♎			
	-2943 Jan 03 j 20:57	0°♎					-2938 Jan 08 j 04:40	0°♎			
							-2938 Mar 06 j 21:35	0°♎			
conjunction	-2943 Feb 09 j 07:34	27°♎50'12	-1°-4'-27		desc. node		-2938 Apr 11 j 13:01	10°♎32'16			
minimum elong	-2943 Feb 09 j 09:06	27°♎53'05	1°04'32		retrograde		-2938 Apr 22 j 11:45	11°♎16'20			
	-2943 Feb 12 j 04:50	0°♎			opposition		-2938 May 23 j 01:36	6°♎10'47	-2°-56'-12		
	-2943 Mar 25 j 06:23	0°♎			greatest brilliancy		-2938 May 23 j 12:06	6°♎03'38	-2.8m		
max. Earth dist.	-2943 Mar 28 j 08:12	2°♎11'13	2.46962 AU		min. Earth dist.		-2938 May 26 j 11:31	5°♎15'09	0.38480 AU		
morning rise	-2943 Apr 12 j 14:10	12°♎54'39			direct		-2938 Jun 23 j 10:18	0°♎41'20			
	-2943 May 07 j 12:02	0°♎					-2938 Sep 08 j 22:45	0°♎			
	-2943 Jun 22 j 02:58	0°♎					-2938 Oct 25 j 17:49	0°♎			
asc. node	-2943 Jun 27 j 16:08	3°♎32'17					-2938 Dec 09 j 08:01	0°♎			
	-2943 Aug 09 j 11:56	0°♎					-2937 Jan 23 j 04:52	0°♎			
	-2943 Oct 01 j 15:48	0°♎			asc. node		-2937 Feb 17 j 11:00	16°♎36'21			
retrograde	-2943 Dec 25 j 10:59	28°♎11'44					-2937 Mar 10 j 01:43	0°♎			
opposition	-2942 Feb 01 j 06:30	19°♎41'20	4°57'04				-2937 Apr 25 j 20:57	0°♎			
greatest brilliancy	-2942 Feb 02 j 12:23	19°♎12'38	-1.5m		evening set		-2937 May 11 j 12:13	9°♎56'53			
min. Earth dist.	-2942 Feb 06 j 23:06	17°♎30'29	0.61229 AU				-2937 Jun 12 j 01:11	0°♎			
direct	-2942 Mar 14 j 04:31	9°♎48'45			max. Earth dist.		-2937 Jun 22 j 06:59	6°♎31'29	2.67060 AU		
	-2942 May 18 j 15:16	0°♎									
desc. node	-2942 Jul 07 j 13:11	29°♎49'09			conjunction		-2937 Jun 27 j 12:26	9°♎51'41	1°00'41		
	-2942 Jul 07 j 19:44	0°♎			minimum elong		-2937 Jun 27 j 11:19	9°♎49'54	1°00'46		
	-2942 Aug 19 j 14:18	0°♎					-2937 Jul 28 j 21:18	0°♎			
	-2942 Sep 28 j 08:42	0°♎			morning rise		-2937 Aug 11 j 14:01	8°♎52'23			
	-2942 Nov 05 j 23:27	0°♎					-2937 Sep 12 j 19:52	0°♎			
	-2942 Dec 14 j 16:47	0°♎					-2937 Oct 27 j 15:55	0°♎			
	-2941 Jan 23 j 11:31	0°♎					-2937 Dec 10 j 11:59	0°♎			
evening set	-2941 Feb 09 j 07:56	12°♎20'55			desc. node		-2936 Jan 22 j 16:13	0°♎			
	-2941 Mar 05 j 23:38	0°♎					-2936 Feb 27 j 13:01	24°♎53'22			
							-2936 Mar 06 j 00:04	0°♎			
conjunction	-2941 Apr 07 j 08:39	22°♎26'51	0°-22'-10				-2936 Apr 20 j 22:44	0°♎			
minimum elong	-2941 Apr 07 j 09:46	22°♎28'47	0°22'10		retrograde		-2936 Jul 05 j 05:03	28°♎43'48			
	-2941 Apr 18 j 12:11	0°♎			min. Earth dist.		-2936 Aug 01 j 00:04	23°♎58'48	0.42251 AU		
max. Earth dist.	-2941 May 04 j 03:01	10°♎26'33	2.58671 AU		greatest brilliancy		-2936 Aug 06 j 13:43	22°♎13'00	-2.5m		
asc. node	-2941 May 15 j 14:32	18°♎01'27			opposition		-2936 Aug 08 j 13:25	21°♎34'50	-6°-16'-9		
morning rise	-2941 May 29 j 16:27	27°♎13'24			direct		-2936 Sep 08 j 19:08	15°♎40'08			

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 47

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-2936 Oct 31 j 20:22	0°♊		minimum elong	-2931 Nov 05 j 18:48	21°♊30'58	0°12'10
	-2936 Dec 27 j 05:04	0°♋		behind sun begin	-2931 Nov 05 j 01:25	20°♊57'25	
asc. node	-2935 Jan 04 j 09:50	4°♋47'13		behind sun end	-2931 Nov 06 j 12:11	22°♊04'32	
	-2935 Feb 15 j 11:37	0°♌			-2931 Nov 16 j 17:23	0°♌	
	-2935 Apr 05 j 10:44	0°♍			-2931 Dec 25 j 00:16	0°♍	
	-2935 May 23 j 15:00	0°♎		morning rise	-2930 Jan 09 j 09:57	12°♍05'44	
evening set	-2935 Jun 17 j 17:34	15°♎54'14			-2930 Feb 01 j 08:25	0°♏	
	-2935 Jul 09 j 15:44	0°♐			-2930 Mar 12 j 14:51	0°♐	
max. Earth dist.	-2935 Jul 15 j 11:13	3°♐46'31	2.63165 AU		-2930 Apr 22 j 15:57	0°♋	
					-2930 Jun 05 j 09:22	0°♌	
conjunction	-2935 Aug 03 j 05:25	16°♐04'47	1°10'27		-2930 Jul 23 j 07:14	0°♍	
minimum elong	-2935 Aug 03 j 05:40	16°♐05'11	1°10'33	asc. node	-2930 Aug 27 j 08:28	19°♍10'40	
	-2935 Aug 24 j 02:05	0°♎			-2930 Sep 20 j 05:33	0°♎	
morning rise	-2935 Sep 18 j 12:34	17°♎20'14		retrograde	-2930 Nov 04 j 16:38	10°♎24'39	
	-2935 Oct 06 j 17:28	0°♏		opposition	-2930 Dec 14 j 13:07	0°♎46'42	3°34'44
	-2935 Nov 17 j 16:49	0°♐		greatest brilliancy	-2930 Dec 14 j 12:47	0°♎47'03	-1.2m
	-2935 Dec 28 j 08:36	0°♑		min. Earth dist.	-2930 Dec 14 j 22:23	0°♎37'26	0.67314 AU
desc. node	-2934 Jan 14 j 11:52	12°♑50'43			-2930 Dec 16 j 11:50	30°♏♌	
	-2934 Feb 06 j 06:11	0°♍		direct	-2929 Jan 24 j 06:12	20°♏56'03	
	-2934 Mar 18 j 06:14	0°♎			-2929 Mar 08 j 02:46	0°♎	
	-2934 Apr 28 j 19:01	0°♏			-2929 May 08 j 12:33	0°♐	
	-2934 Jun 14 j 05:06	0°♋			-2929 Jun 26 j 06:50	0°♑	
retrograde	-2934 Aug 24 j 10:33	25°♋25'01			-2929 Aug 09 j 04:15	0°♒	
min. Earth dist.	-2934 Sep 25 j 07:46	18°♋30'39	0.54746 AU	desc. node	-2929 Sep 06 j 07:25	20°♒27'57	
greatest brilliancy	-2934 Oct 01 j 09:02	16°♋10'32	-1.9m		-2929 Sep 19 j 01:02	0°♓	
opposition	-2934 Oct 02 j 03:39	15°♋52'34	-2°-16'-15		-2929 Oct 28 j 00:42	0°♑	
direct	-2934 Nov 06 j 17:44	7°♋53'22		evening set	-2929 Nov 09 j 10:17	9°♑43'12	
asc. node	-2934 Nov 22 j 09:24	9°♋21'13			-2929 Dec 05 j 03:52	0°♍	
	-2933 Jan 17 j 16:17	0°♌			-2928 Jan 12 j 09:54	0°♎	
	-2933 Mar 14 j 13:08	0°♍					
	-2933 May 04 j 04:42	0°♎		conjunction	-2928 Jan 14 j 06:57	1°♎27'26	-1°-5'-53
	-2933 Jun 21 j 02:59	0°♏		minimum elong	-2928 Jan 14 j 05:49	1°♎25'15	1°05'59
evening set	-2933 Jul 27 j 03:56	23°♏38'07			-2928 Feb 20 j 15:52	0°♐	
	-2933 Aug 05 j 14:47	0°♑		max. Earth dist.	-2928 Mar 03 j 07:08	8°♐40'15	2.41698 AU
max. Earth dist.	-2933 Aug 13 j 18:17	5°♑32'38	2.54278 AU	morning rise	-2928 Mar 20 j 18:51	21°♐28'45	
					-2928 Apr 01 j 15:07	0°♋	
conjunction	-2933 Sep 14 j 06:10	27°♑29'54	0°48'02		-2928 May 14 j 20:19	0°♌	
minimum elong	-2933 Sep 14 j 07:50	27°♑32'52	0°48'03		-2928 Jun 29 j 17:14	0°♍	
	-2933 Sep 17 j 18:31	0°♒		asc. node	-2928 Jul 14 j 08:34	9°♍09'36	
	-2933 Oct 28 j 21:29	0°♓			-2928 Aug 18 j 03:56	0°♎	
morning rise	-2933 Nov 05 j 11:34	5°♓40'19			-2928 Oct 15 j 03:46	0°♏	
desc. node	-2933 Dec 02 j 11:48	26°♓09'16		retrograde	-2928 Dec 09 j 20:56	14°♓19'02	
	-2933 Dec 07 j 12:09	0°♑		opposition	-2927 Jan 17 j 11:49	5°♓24'32	4°49'54
	-2932 Jan 15 j 06:56	0°♍		greatest brilliancy	-2927 Jan 18 j 08:20	5°♓04'29	-1.4m
	-2932 Feb 23 j 01:33	0°♎		min. Earth dist.	-2927 Jan 21 j 17:18	3°♓45'29	0.64197 AU
	-2932 Apr 02 j 18:57	0°♏			-2927 Feb 01 j 01:11	30°♒♎	
	-2932 May 14 j 16:23	0°♋		direct	-2927 Feb 27 j 16:49	25°♎24'19	
	-2932 Jun 29 j 21:47	0°♌			-2927 Mar 28 j 11:30	0°♏	
	-2932 Aug 29 j 17:35	0°♍			-2927 May 31 j 14:17	0°♑	
retrograde	-2932 Sep 30 j 21:29	5°♍56'26			-2927 Jul 17 j 09:53	0°♒	
asc. node	-2932 Oct 09 j 08:37	5°♍26'45		desc. node	-2927 Jul 24 j 05:54	4°♒43'44	
	-2932 Oct 30 j 16:08	30°♒♌			-2927 Aug 28 j 05:41	0°♓	
min. Earth dist.	-2932 Nov 06 j 12:33	27°♌20'22	0.64007 AU		-2927 Oct 06 j 14:22	0°♑	
opposition	-2932 Nov 09 j 21:55	25°♌58'39	1°13'50		-2927 Nov 13 j 22:52	0°♍	
greatest brilliancy	-2932 Nov 09 j 16:00	26°♌04'36	-1.4m		-2927 Dec 22 j 10:37	0°♎	
direct	-2932 Dec 18 j 17:40	16°♌46'31		evening set	-2926 Jan 16 j 12:08	19°♎08'37	
	-2931 Feb 10 j 05:05	0°♍			-2926 Jan 30 j 23:43	0°♏	
	-2931 Apr 10 j 23:47	0°♎			-2926 Mar 13 j 06:15	0°♋	
	-2931 May 31 j 10:13	0°♏					
	-2931 Jul 16 j 16:15	0°♑		conjunction	-2926 Mar 18 j 04:03	3°♋28'20	0°-41'-54
	-2931 Aug 28 j 20:10	0°♒		minimum elong	-2926 Mar 18 j 06:11	3°♋32'04	0°41'57
evening set	-2931 Sep 10 j 05:49	8°♒57'51		max. Earth dist.	-2926 Apr 21 j 22:44	27°♋31'19	2.54589 AU
max. Earth dist.	-2931 Sep 28 j 20:49	22°♒41'50	2.41997 AU		-2926 Apr 25 j 14:36	0°♌	
	-2931 Oct 08 j 14:38	0°♓		morning rise	-2926 May 12 j 19:37	11°♌31'24	
desc. node	-2931 Oct 19 j 10:01	8°♓11'19		asc. node	-2926 Jun 01 j 06:48	24°♌19'16	
					-2926 Jun 10 j 00:52	0°♍	
conjunction	-2931 Nov 05 j 19:42	21°♓32'42	0°-12'-8		-2926 Jul 27 j 10:27	0°♎	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 48

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-2926 Sep 15 j 04:23	0°☿		asc. node	-2920 Jan 22 j 01:01	8°♄42'36	
	-2926 Nov 09 j 05:13	0°♂			-2920 Feb 25 j 00:02	0°♂	
retrograde	-2925 Jan 22 j 03:09	22°♂43'05			-2920 Apr 12 j 21:11	0°♄	
opposition	-2925 Feb 27 j 07:05	15°♂01'03	4°28'24		-2920 May 30 j 13:41	0°♂	
greatest brilliancy	-2925 Feb 28 j 23:21	14°♂24'10	-1.8m	evening set	-2920 Jun 02 j 23:43	2°♂09'53	
min. Earth dist.	-2925 Mar 07 j 00:09	12°♂12'31	0.54830 AU	max. Earth dist.	-2920 Jul 05 j 20:18	23°♂08'22	2.65333 AU
direct	-2925 Apr 08 j 00:29	5°♂42'02			-2920 Jul 16 j 11:19	0°☿	
desc. node	-2925 Jun 11 j 05:21	26°♂21'59					
	-2925 Jun 17 j 18:28	0°♄		conjunction	-2920 Jul 19 j 08:20	1°☿51'53	1°09'58
	-2925 Aug 03 j 13:21	0°♂		minimum elong	-2920 Jul 19 j 07:55	1°☿51'14	1°10'03
	-2925 Sep 13 j 18:31	0°♄			-2920 Aug 31 j 01:07	0°♂	
	-2925 Oct 23 j 04:33	0°♄		morning rise	-2920 Sep 02 j 17:13	1°♂47'22	
	-2925 Dec 01 j 12:34	0°♄			-2920 Oct 14 j 01:42	0°♄	
	-2924 Jan 10 j 20:25	0°♄			-2920 Nov 25 j 14:45	0°♂	
	-2924 Feb 21 j 20:06	0°♄			-2919 Jan 05 j 23:40	0°♄	
evening set	-2924 Mar 12 j 18:57	13°♄47'44		desc. node	-2919 Jan 31 j 06:05	18°♄35'28	
	-2924 Apr 05 j 17:44	0°♂			-2919 Feb 15 j 17:07	0°♄	
asc. node	-2924 Apr 18 j 04:36	8°♂17'30			-2919 Mar 28 j 19:14	0°♄	
					-2919 May 11 j 10:54	0°♄	
conjunction	-2924 May 04 j 04:58	18°♂50'00	0°09'14		-2919 Jul 06 j 16:43	0°♄	
minimum elong	-2924 May 04 j 04:33	18°♂49'20	0°09'16	retrograde	-2919 Aug 06 j 23:37	6°♄15'42	
behind sun begin	-2924 May 03 j 11:25	18°♂21'17		min. Earth dist.	-2919 Sep 05 j 16:50	0°♄11'59	0.49876 AU
behind sun end	-2924 May 04 j 21:42	19°♂17'22			-2919 Sep 06 j 06:08	30°♄	
max. Earth dist.	-2924 May 19 j 17:07	28°♂55'56	2.63519 AU	greatest brilliancy	-2919 Sep 12 j 01:17	27°♄51'45	-2.1m
	-2924 May 21 j 08:42	0°♄		opposition	-2919 Sep 13 j 11:44	27°♄19'56	-3°-55'-17
morning rise	-2924 Jun 21 j 19:27	20°♄11'54		direct	-2919 Oct 17 j 10:31	20°♄03'07	
	-2924 Jul 07 j 05:18	0°♂			-2919 Nov 30 j 07:30	0°♄	
	-2924 Aug 23 j 20:09	0°☿		asc. node	-2919 Dec 08 j 23:43	3°♄34'48	
	-2924 Oct 11 j 04:57	0°♂			-2918 Jan 30 j 06:22	0°♂	
	-2924 Nov 30 j 10:02	0°♄			-2918 Mar 23 j 05:37	0°♄	
	-2923 Jan 26 j 17:36	0°♂			-2918 May 11 j 15:27	0°♂	
retrograde	-2923 Mar 22 j 21:12	14°♂28'17			-2918 Jun 28 j 03:06	0°☿	
opposition	-2923 Apr 23 j 19:37	8°♂43'41	0°17'21	evening set	-2918 Jul 11 j 10:03	8°☿38'06	
greatest brilliancy	-2923 Apr 23 j 13:36	8°♂48'14	-2.6m	max. Earth dist.	-2918 Aug 01 j 10:38	22°☿31'57	2.58308 AU
desc. node	-2923 Apr 28 j 04:31	7°♂24'03			-2918 Aug 12 j 13:11	0°♂	
min. Earth dist.	-2923 Apr 30 j 22:27	6°♂34'48	0.41975 AU				
direct	-2923 May 28 j 06:06	1°♂57'14		conjunction	-2918 Aug 28 j 00:35	10°♂33'21	1°01'09
	-2923 Aug 10 j 12:19	0°♄		minimum elong	-2918 Aug 28 j 01:51	10°♂35'33	1°01'13
	-2923 Sep 24 j 21:13	0°♄			-2918 Sep 24 j 20:34	0°♄	
	-2923 Nov 06 j 08:38	0°♄		morning rise	-2918 Oct 16 j 04:02	15°♄17'08	
	-2923 Dec 18 j 20:51	0°♄			-2918 Nov 05 j 06:17	0°♂	
	-2922 Jan 31 j 11:35	0°♄			-2918 Dec 15 j 05:13	0°♄	
asc. node	-2922 Mar 06 j 03:05	22°♄29'00		desc. node	-2918 Dec 19 j 04:27	3°♄01'22	
	-2922 Mar 17 j 13:22	0°♂			-2917 Jan 23 j 08:18	0°♄	
evening set	-2922 Apr 26 j 01:13	25°♂36'51			-2917 Mar 03 j 10:56	0°♄	
	-2922 May 02 j 21:11	0°♄			-2917 Apr 12 j 14:18	0°♄	
					-2917 May 25 j 08:03	0°♄	
conjunction	-2922 Jun 12 j 23:12	26°♄14'24	0°50'06		-2917 Jul 13 j 12:49	0°♂	
minimum elong	-2922 Jun 12 j 21:55	26°♄12'21	0°50'10	retrograde	-2917 Sep 17 j 16:47	21°♂28'00	
max. Earth dist.	-2922 Jun 13 j 04:29	26°♄22'49	2.67142 AU	min. Earth dist.	-2917 Oct 22 j 14:35	13°♂27'46	0.61008 AU
	-2922 Jun 18 j 20:45	0°♂		asc. node	-2917 Oct 26 j 23:53	11°♂42'52	
morning rise	-2922 Jul 28 j 09:54	25°♂15'58		opposition	-2917 Oct 27 j 10:32	11°♂32'16	0°01'06
	-2922 Aug 04 j 18:56	0°☿		greatest brilliancy	-2915 Jul 03 j 07:54	12°♂15'10	-8.5m
	-2922 Sep 20 j 03:23	0°♂		direct	-2917 Dec 04 j 03:51	2°♂43'45	
	-2922 Nov 04 j 19:16	0°♄			-2916 Feb 25 j 10:56	0°♄	
	-2922 Dec 20 j 00:22	0°♂			-2916 Apr 19 j 20:44	0°♂	
	-2921 Feb 03 j 10:52	0°♄			-2916 Jun 08 j 00:39	0°☿	
desc. node	-2921 Mar 16 j 06:05	25°♄49'54			-2916 Jul 23 j 21:25	0°♂	
	-2921 Mar 23 j 05:37	0°♄		evening set	-2916 Aug 22 j 02:23	20°♂07'42	
retrograde	-2921 Jun 10 j 03:43	29°♄47'55			-2916 Sep 05 j 00:20	0°♄	
min. Earth dist.	-2921 Jul 07 j 07:27	25°♄21'56	0.38660 AU	max. Earth dist.	-2916 Sep 06 j 04:33	0°♄50'34	2.46928 AU
greatest brilliancy	-2921 Jul 10 j 17:21	24°♄24'18	-2.8m				
opposition	-2921 Jul 12 j 01:07	24°♄01'52	-6°-33'-16	conjunction	-2916 Oct 14 j 00:52	28°♄36'47	0°15'06
direct	-2921 Aug 10 j 21:31	18°♄53'52		minimum elong	-2916 Oct 14 j 01:47	28°♄38'29	0°15'05
	-2921 Sep 24 j 21:23	0°♄		behind sun begin	-2916 Oct 13 j 16:37	28°♄21'19	
	-2921 Nov 20 j 04:50	0°♄		behind sun end	-2916 Oct 14 j 10:56	28°♄55'39	
	-2920 Jan 08 j 02:42	0°♄			-2916 Oct 15 j 21:15	0°♂	

Planetary Phenomena of Mars from -3400 through -2900 (UT), Astrodienst AG 7-Dez-2017 14:39, page 49

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

desc. node	-2916 Nov 05 j 03:02	15°♂20'42				-2910 Feb 06 j 20:14	30°♂♂	
	-2916 Nov 24 j 03:46	0°♂		opposition		-2910 Feb 10 j 05:51	28°♂43'41	4°53'03
morning rise	-2916 Dec 12 j 07:48	14°♂08'21		greatest brilliancy		-2910 Feb 11 j 16:26	28°♂10'56	-1.6m
	-2915 Jan 01 j 14:18	0°♂		min. Earth dist.		-2910 Feb 16 j 17:21	26°♂16'55	0.59179 AU
greatest brilliancy	-2915 Feb 09 j 05:46	0°♂08'41	1.2m	direct		-2910 Mar 22 j 21:05	18°♂59'23	
	-2915 Feb 09 j 01:16	0°♂				-2910 May 07 j 09:15	0°♂	
	-2915 Mar 20 j 10:12	0°♂		desc. node		-2910 Jun 27 j 22:09	28°♂00'28	
	-2915 Apr 30 j 15:34	0°♂				-2910 Jul 01 j 01:22	0°♂	
	-2915 Jun 13 j 21:53	0°♂				-2910 Aug 13 j 18:59	0°♂	
	-2915 Aug 02 j 20:23	0°♂				-2910 Sep 22 j 22:48	0°♂	
asc. node	-2915 Sep 13 j 00:37	19°♂18'27				-2910 Oct 31 j 18:50	0°♂	
retrograde	-2915 Oct 22 j 06:06	27°♂29'43				-2910 Dec 09 j 16:02	0°♂	
min. Earth dist.	-2915 Nov 30 j 04:48	18°♂07'37	0.66765 AU			-2909 Jan 18 j 14:19	0°♂	
opposition	-2915 Dec 01 j 07:22	17°♂40'56	2°47'43	evening set		-2909 Feb 21 j 17:57	24°♂42'47	
greatest brilliancy	-2915 Dec 01 j 02:15	17°♂46'04	-1.3m			-2909 Mar 01 j 05:23	0°♂	
direct	-2914 Jan 10 j 10:32	8°♂02'10				-2909 Apr 13 j 20:06	0°♂	
	-2914 Mar 24 j 03:53	0°♂						
	-2914 May 17 j 19:07	0°♂		conjunction		-2909 Apr 17 j 22:24	2°♂45'00	0°-10'-28
	-2914 Jul 04 j 05:51	0°♂		minimum elong		-2909 Apr 17 j 22:55	2°♂45'52	0°10'28
	-2914 Aug 16 j 18:12	0°♂		behind sun begin		-2909 Apr 17 j 06:15	2°♂17'57	
desc. node	-2914 Sep 23 j 01:22	27°♂22'29		behind sun end		-2909 Apr 18 j 15:35	3°♂13'47	
	-2914 Sep 26 j 12:59	0°♂		asc. node		-2909 May 05 j 20:50	14°♂40'30	
evening set	-2914 Oct 14 j 21:57	14°♂00'19		max. Earth dist.		-2909 May 10 j 12:32	17°♂44'20	2.60630 AU
	-2914 Nov 04 j 13:03	0°♂				-2909 May 29 j 07:25	0°♂	
	-2914 Dec 12 j 16:44	0°♂		morning rise		-2909 Jun 07 j 17:23	6°♂04'57	
						-2909 Jul 15 j 06:26	0°♂	
conjunction	-2914 Dec 17 j 02:32	3°♂28'36	0°-52'-45			-2909 Sep 01 j 10:50	0°♂	
minimum elong	-2914 Dec 16 j 23:26	3°♂22'28	0°52'49			-2909 Oct 21 j 09:24	0°♂	
max. Earth dist.	-2913 Jan 06 j 19:54	19°♂46'07	2.37645 AU			-2909 Dec 15 j 09:22	0°♂	
	-2913 Jan 19 j 22:26	0°♂		retrograde		-2908 Feb 25 j 02:36	21°♂53'48	
morning rise	-2913 Feb 23 j 18:02	26°♂41'59		opposition		-2908 Mar 29 j 21:17	15°♂18'49	2°37'50
	-2913 Feb 28 j 03:17	0°♂		greatest brilliancy		-2908 Mar 31 j 04:34	14°♂52'48	-2.2m
	-2913 Apr 10 j 01:31	0°♂		min. Earth dist.		-2908 Apr 07 j 09:38	12°♂29'34	0.46930 AU
	-2913 May 23 j 08:27	0°♂		direct		-2908 May 06 j 00:54	7°♂15'51	
	-2913 Jul 08 j 16:32	0°♂		desc. node		-2908 May 14 j 22:47	7°♂48'20	
asc. node	-2913 Jul 31 j 23:44	14°♂08'12				-2908 Jul 10 j 20:35	0°♂	
	-2913 Aug 28 j 23:09	0°♂				-2908 Aug 26 j 02:32	0°♂	
	-2913 Nov 12 j 18:40	0°♂				-2908 Oct 06 j 14:33	0°♂	
retrograde	-2913 Nov 26 j 08:05	1°♂05'04				-2908 Nov 16 j 05:55	0°♂	
	-2913 Dec 09 j 05:49	30°♂♂				-2908 Dec 27 j 13:46	0°♂	
opposition	-2912 Jan 04 j 13:48	21°♂50'49	4°29'13			-2907 Feb 08 j 08:30	0°♂	
greatest brilliancy	-2912 Jan 05 j 01:08	21°♂39'37	-1.3m	asc. node		-2907 Mar 22 j 18:15	28°♂37'00	
min. Earth dist.	-2912 Jan 07 j 07:10	20°♂46'14	0.66189 AU			-2907 Mar 24 j 20:21	0°♂	
direct	-2912 Feb 14 j 18:45	11°♂50'24		evening set		-2907 Apr 09 j 19:28	10°♂30'42	
	-2912 Apr 18 j 04:47	0°♂				-2907 May 09 j 19:40	0°♂	
	-2912 Jun 10 j 20:42	0°♂						
	-2912 Jul 26 j 01:39	0°♂		conjunction		-2907 May 29 j 02:13	12°♂22'48	0°36'22
desc. node	-2912 Aug 09 j 22:55	10°♂34'05		minimum elong		-2907 May 29 j 01:02	12°♂20'54	0°36'25
	-2912 Sep 05 j 09:00	0°♂		max. Earth dist.		-2907 Jun 03 j 21:16	16°♂05'17	2.66376 AU
	-2912 Oct 14 j 12:33	0°♂				-2907 Jun 25 j 16:28	0°♂	
	-2912 Nov 21 j 17:45	0°♂		morning rise		-2907 Jul 14 j 09:16	11°♂54'36	
evening set	-2912 Dec 21 j 05:02	23°♂06'18				-2907 Aug 11 j 18:43	0°♂	
	-2912 Dec 30 j 01:59	0°♂				-2907 Sep 27 j 16:54	0°♂	
	-2911 Feb 07 j 10:58	0°♂				-2907 Nov 13 j 13:12	0°♂	
						-2907 Dec 31 j 00:36	0°♂	
conjunction	-2911 Feb 23 j 09:28	11°♂48'27	0°-58'-20			-2906 Feb 19 j 10:14	0°♂	
minimum elong	-2911 Feb 23 j 11:43	11°♂52'35	0°58'23	desc. node		-2906 Apr 01 j 22:40	20°♂11'34	
	-2911 Mar 20 j 13:10	0°♂		retrograde		-2906 May 10 j 16:04	28°♂32'53	
max. Earth dist.	-2911 Apr 07 j 09:42	12°♂34'54	2.49810 AU	opposition		-2906 Jun 09 j 23:58	23°♂30'46	-4°-43'-35
morning rise	-2911 Apr 24 j 04:00	24°♂09'07		greatest brilliancy		-2906 Jun 10 j 00:55	23°♂30'08	-2.9m
	-2911 May 02 j 18:28	0°♂		min. Earth dist.		-2906 Jun 10 j 12:34	23°♂22'24	0.37681 AU
asc. node	-2911 Jun 17 j 22:40	0°♂26'46		direct		-2906 Jul 10 j 06:42	18°♂26'21	
	-2911 Jun 17 j 06:01	0°♂				-2906 Aug 24 j 07:22	0°♂	
	-2911 Aug 04 j 03:46	0°♂				-2906 Oct 17 j 01:55	0°♂	
	-2911 Sep 24 j 16:09	0°♂				-2906 Dec 02 j 17:13	0°♂	
	-2911 Nov 27 j 23:32	0°♂				-2905 Jan 17 j 13:53	0°♂	
retrograde	-2910 Jan 03 j 22:29	6°♂58'44		asc. node		-2905 Feb 07 j 16:38	13°♂42'27	

Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style.

	-2905 Mar 04 j 23:56	0°♄	desc. node	-2901 Nov 22 j 20:17	22°♅27'41	
	-2905 Apr 21 j 02:33	0°♄		-2901 Dec 02 j 15:54	0°♄	
evening set	-2905 May 20 j 03:56	18°♄24'24		-2900 Jan 10 j 07:41	0°♄	
	-2905 Jun 07 j 10:31	0°♄		-2900 Feb 17 j 22:59	0°♄	
max. Earth dist.	-2905 Jun 27 j 16:18	12°♄53'52	2.66679 AU	-2900 Mar 28 j 12:06	0°♄	
				-2900 May 09 j 01:08	0°♄	
conjunction	-2905 Jul 05 j 19:47	18°♄06'45	1°05'14	-2900 Jun 23 j 06:13	0°♄	
minimum elong	-2905 Jul 05 j 18:53	18°♄05'18	1°05'18	-2900 Aug 16 j 13:30	0°♄	
	-2905 Jul 24 j 06:56	0°♄	asc. node	-2900 Sep 29 j 15:16	13°♄42'43	
morning rise	-2905 Aug 19 j 20:32	17°♄18'08	retrograde	-2900 Oct 08 j 18:03	14°♄14'51	
	-2905 Sep 08 j 02:09	0°♄	min. Earth dist.	-2900 Nov 15 j 06:25	5°♄21'19	0.65252 AU
	-2905 Oct 22 j 14:36	0°♄	opposition	-2900 Nov 17 j 20:30	4°♄18'55	1°51'16
	-2905 Dec 04 j 21:51	0°♄	greatest brilliancy	-2900 Nov 17 j 13:40	4°♄25'47	-1.4m
	-2904 Jan 16 j 07:14	0°♄		-2900 Nov 29 j 04:01	30°♄	
desc. node	-2904 Feb 17 j 22:24	23°♄16'44	direct	-2900 Dec 27 j 05:12	24°♄56'00	
	-2904 Feb 27 j 09:17	0°♄				
	-2904 Apr 10 j 16:38	0°♄				
	-2904 May 30 j 21:08	0°♄				
retrograde	-2904 Jul 18 j 00:02	13°♄42'00				
min. Earth dist.	-2904 Aug 14 j 15:49	8°♄30'45	0.44854 AU			
greatest brilliancy	-2904 Aug 20 j 17:32	6°♄27'32	-2.4m			
opposition	-2904 Aug 22 j 15:52	5°♄47'56	-5°-32'-49			
	-2904 Sep 14 j 06:19	30°♄				
direct	-2904 Sep 23 j 21:27	29°♄22'16				
	-2904 Oct 03 j 17:58	0°♄				
	-2904 Dec 18 j 23:51	0°♄				
asc. node	-2904 Dec 25 j 16:03	3°♄38'20				
	-2903 Feb 09 j 12:01	0°♄				
	-2903 Mar 31 j 07:13	0°♄				
	-2903 May 18 j 20:36	0°♄				
evening set	-2903 Jun 26 j 06:33	24°♄20'53				
	-2903 Jul 05 j 00:58	0°♄				
max. Earth dist.	-2903 Jul 21 j 11:12	10°♄42'16	2.61652 AU			
conjunction	-2903 Aug 12 j 00:18	24°♄59'02	1°08'33			
minimum elong	-2903 Aug 12 j 00:55	25°♄00'05	1°08'38			
	-2903 Aug 19 j 11:26	0°♄				
morning rise	-2903 Sep 28 j 02:07	27°♄14'36				
	-2903 Oct 02 j 00:17	0°♄				
	-2903 Nov 12 j 18:42	0°♄				
	-2903 Dec 23 j 04:01	0°♄				
desc. node	-2902 Jan 04 j 21:54	9°♄37'10				
	-2902 Jan 31 j 17:57	0°♄				
	-2902 Mar 12 j 08:07	0°♄				
	-2902 Apr 22 j 04:18	0°♄				
	-2902 Jun 05 j 14:32	0°♄				
	-2902 Aug 03 j 05:58	0°♄				
retrograde	-2902 Sep 02 j 14:47	5°♄40'48				
	-2902 Oct 01 j 06:45	30°♄				
min. Earth dist.	-2902 Oct 05 j 15:13	28°♄21'33	0.57182 AU			
opposition	-2902 Oct 11 j 19:35	25°♄56'18	-1°-22'-52			
greatest brilliancy	-2902 Oct 11 j 09:04	26°♄06'36	-1.7m			
asc. node	-2902 Nov 12 j 15:19	17°♄45'42				
direct	-2902 Nov 17 j 05:39	17°♄37'27				
	-2901 Jan 06 j 23:40	0°♄				
	-2901 Mar 08 j 07:02	0°♄				
	-2901 Apr 29 j 00:09	0°♄				
	-2901 Jun 16 j 07:53	0°♄				
	-2901 Jul 31 j 22:55	0°♄				
evening set	-2901 Aug 05 j 14:52	3°♄09'52				
max. Earth dist.	-2901 Aug 21 j 18:29	14°♄15'58	2.51781 AU			
	-2901 Sep 13 j 02:47	0°♄				
conjunction	-2901 Sep 24 j 20:10	8°♄25'45	0°37'41			
minimum elong	-2901 Sep 24 j 21:49	8°♄28'44	0°37'42			
	-2901 Oct 24 j 03:55	0°♄				
morning rise	-2901 Nov 18 j 06:12	18°♄57'17				

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 1

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

conjunction	-2899 Nov 20 j 01:39	6°♌19'37	0°-28'-15			-2893 Jan 10 j 18:27	0°♐	
minimum elong	-2899 Nov 19 j 23:31	6°♌15'25	0°28'18	retrograde		-2893 Feb 02 j 12:23	2°♐53'13	
	-2899 Dec 20 j 04:46	0°♏				-2893 Feb 24 j 00:16	30°♐	
morning rise	-2898 Jan 26 j 01:14	28°♏53'12		opposition		-2893 Mar 09 j 22:41	25°♏32'52	4°00'00
	-2898 Jan 27 j 11:36	0°♏		greatest brilliancy		-2893 Mar 11 j 15:12	24°♏56'48	-1.9m
	-2898 Mar 07 j 16:47	0°♏		min. Earth dist.		-2893 Mar 18 j 04:42	22°♏37'32	0.52117 AU
	-2898 Apr 17 j 15:46	0°♏		direct		-2893 Apr 17 j 23:03	16°♏35'11	
	-2898 May 31 j 03:13	0°♏		desc. node		-2893 Jun 01 j 14:37	27°♏51'07	
	-2898 Jul 17 j 06:10	0°♏				-2893 Jun 06 j 06:03	0°♏	
asc. node	-2898 Aug 17 j 15:30	18°♏04'05				-2893 Jul 27 j 06:24	0°♏	
	-2898 Sep 09 j 23:51	0°♏				-2893 Sep 07 j 13:41	0°♏	
retrograde	-2898 Nov 12 j 10:56	18°♏11'48				-2893 Oct 17 j 12:29	0°♏	
opposition	-2898 Dec 22 j 03:32	8°♏41'21	3°57'33			-2893 Nov 26 j 04:48	0°♏	
greatest brilliancy	-2898 Dec 22 j 06:51	8°♏38'03	-1.2m			-2892 Jan 05 j 19:03	0°♏	
min. Earth dist.	-2898 Dec 23 j 08:42	8°♏12'17	0.67202 AU			-2892 Feb 16 j 23:49	0°♏	
	-2897 Jan 18 j 06:02	30°♏		evening set		-2892 Mar 23 j 08:43	24°♏11'11	
direct	-2897 Feb 01 j 02:42	28°♏45'57				-2892 Apr 01 j 00:59	0°♏	
	-2897 Feb 15 j 17:01	0°♏		asc. node		-2892 Apr 08 j 10:52	4°♏55'56	
	-2897 May 01 j 19:16	0°♏						
	-2897 Jun 20 j 20:53	0°♏		conjunction		-2892 May 13 j 12:38	27°♏55'06	0°19'51
	-2897 Aug 04 j 04:22	0°♏		minimum elong		-2892 May 13 j 11:50	27°♏53'49	0°19'53
desc. node	-2897 Aug 27 j 17:07	16°♏59'04				-2892 May 16 j 17:46	0°♏	
	-2897 Sep 14 j 04:39	0°♏		max. Earth dist.		-2892 May 25 j 10:53	5°♏37'35	2.64751 AU
	-2897 Oct 23 j 05:29	0°♏		morning rise		-2892 Jun 30 j 04:10	28°♏28'56	
evening set	-2897 Nov 24 j 17:16	25°♏32'35				-2892 Jul 02 j 13:27	0°♏	
	-2897 Nov 30 j 08:53	0°♏				-2892 Aug 18 j 22:33	0°♏	
	-2896 Jan 07 j 14:50	0°♏				-2892 Oct 05 j 16:27	0°♏	
						-2892 Nov 23 j 08:22	0°♏	
conjunction	-2896 Jan 29 j 20:17	17°♏07'12	-1°-6'-42			-2891 Jan 14 j 05:37	0°♏	
minimum elong	-2896 Jan 29 j 20:50	17°♏08'16	1°06'49	retrograde		-2891 Apr 08 j 14:32	29°♏24'56	
	-2896 Feb 15 j 20:51	0°♏		desc. node		-2891 Apr 18 j 14:51	28°♏47'45	
max. Earth dist.	-2896 Mar 19 j 05:26	23°♏49'04	2.44591 AU	opposition		-2891 May 09 j 17:38	24°♏05'12	-1°-28'-14
	-2896 Mar 27 j 20:04	0°♏		greatest brilliancy		-2891 May 10 j 03:19	23°♏58'19	-2.7m
morning rise	-2896 Apr 03 j 03:00	4°♏28'30		min. Earth dist.		-2891 May 15 j 02:55	22°♏33'35	0.39773 AU
	-2896 May 09 j 23:54	0°♏		direct		-2891 Jun 11 j 09:24	18°♏04'04	
	-2896 Jun 24 j 15:35	0°♏				-2891 Jul 26 j 11:30	0°♏	
asc. node	-2896 Jul 04 j 13:35	6°♏17'13				-2891 Sep 16 j 03:16	0°♏	
	-2896 Aug 12 j 08:29	0°♏				-2891 Oct 30 j 12:03	0°♏	
	-2896 Oct 05 j 23:20	0°♏				-2891 Dec 12 j 23:33	0°♏	
retrograde	-2896 Dec 18 j 14:39	22°♏36'09				-2890 Jan 26 j 04:42	0°♏	
opposition	-2895 Jan 25 j 20:00	13°♏54'17	4°55'32	asc. node		-2890 Feb 24 j 08:40	19°♏20'46	
greatest brilliancy	-2895 Jan 26 j 21:43	13°♏29'23	-1.4m			-2890 Mar 12 j 15:30	0°♏	
min. Earth dist.	-2895 Jan 30 j 21:18	11°♏57'07	0.62686 AU			-2890 Apr 28 j 04:44	0°♏	
direct	-2895 Mar 07 j 22:49	3°♏57'19		evening set		-2890 May 04 j 23:55	4°♏20'36	
	-2895 May 23 j 22:55	0°♏				-2890 Jun 14 j 06:34	0°♏	
	-2895 Jul 11 j 12:25	0°♏		max. Earth dist.		-2890 Jun 18 j 12:39	2°♏42'36	2.67199 AU
desc. node	-2895 Jul 14 j 15:43	2°♏07'15						
	-2895 Aug 22 j 21:14	0°♏		conjunction		-2890 Jun 21 j 08:29	4°♏30'44	0°56'40
	-2895 Oct 01 j 11:40	0°♏		minimum elong		-2890 Jun 21 j 07:16	4°♏28'48	0°56'44
	-2895 Nov 08 j 23:29	0°♏				-2890 Jul 31 j 03:32	0°♏	
	-2895 Dec 17 j 13:30	0°♏		morning rise		-2890 Aug 05 j 12:43	3°♏28'14	
	-2894 Jan 26 j 04:35	0°♏				-2890 Sep 15 j 06:40	0°♏	
evening set	-2894 Jan 30 j 07:24	3°♏03'01				-2890 Oct 30 j 11:19	0°♏	
	-2894 Mar 08 j 12:48	0°♏				-2890 Dec 13 j 20:52	0°♏	
						-2889 Jan 26 j 21:32	0°♏	
conjunction	-2894 Mar 29 j 22:38	14°♏59'06	0°-30'-42	desc. node		-2889 Mar 06 j 15:17	26°♏03'21	
minimum elong	-2894 Mar 30 j 00:14	15°♏01'52	0°30'44			-2889 Mar 12 j 15:22	0°♏	
	-2894 Apr 20 j 21:58	0°♏				-2889 May 01 j 11:10	0°♏	
max. Earth dist.	-2894 Apr 29 j 06:59	5°♏37'56	2.56931 AU	retrograde		-2889 Jun 25 j 11:28	16°♏57'27	
morning rise	-2894 May 22 j 15:47	21°♏06'33		min. Earth dist.		-2889 Jul 22 j 00:22	12°♏26'51	0.40403 AU
asc. node	-2894 May 22 j 11:49	21°♏00'04		greatest brilliancy		-2889 Jul 26 j 20:12	11°♏00'14	-2.7m
	-2894 Jun 05 j 07:19	0°♏		opposition		-2889 Jul 28 j 15:48	10°♏27'20	-6°-36'-17
	-2894 Jul 22 j 11:25	0°♏		direct		-2889 Aug 28 j 03:41	4°♏56'23	
	-2894 Sep 09 j 12:05	0°♏				-2889 Nov 10 j 07:31	0°♏	
	-2894 Nov 01 j 00:33	0°♏				-2888 Jan 01 j 10:39	0°♏	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 2

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

asc. node	-2888 Jan 12 j 06:56	6° Υ 33'52		desc. node	-2884 Oct 26 j 12:49	11° Ω 36'10	
	-2888 Feb 19 j 12:09	0° Υ			-2884 Nov 19 j 10:10	0° \mathbb{M}	
	-2888 Apr 07 j 22:40	0° \mathcal{B}		morning rise	-2884 Dec 27 j 19:27	0° \mathcal{A} 01'19	
	-2888 May 25 j 21:41	0° Π			-2884 Dec 27 j 18:47	0° \mathcal{A}	
evening set	-2888 Jun 11 j 10:27	10° Π 27'59			-2883 Feb 04 j 03:37	0° \mathcal{B}	
max. Earth dist.	-2888 Jul 11 j 09:36	29° Π 40'52	2.64231 AU		-2883 Mar 15 j 09:58	0° \approx	
	-2888 Jul 11 j 21:26	0° \mathcal{E}			-2883 Apr 25 j 11:14	0° \mathcal{H}	
					-2883 Jun 08 j 07:13	0° Υ	
conjunction	-2888 Jul 27 j 19:28	10° \mathcal{E} 22'06	1°10'48		-2883 Jul 26 j 19:05	0° \mathcal{B}	
minimum elong	-2888 Jul 27 j 19:26	10° \mathcal{E} 22'02	1°10'52	asc. node	-2883 Sep 03 j 05:37	20° \mathcal{B} 02'58	
	-2888 Aug 26 j 10:01	0° Ω			-2883 Sep 28 j 15:30	0° Π	
morning rise	-2888 Sep 11 j 14:57	10° Ω 57'19		retrograde	-2883 Oct 29 j 22:53	5° Π 23'54	
	-2888 Oct 09 j 06:06	0° \mathbb{M}			-2883 Nov 27 j 17:40	30° $\mathcal{R}\mathcal{B}$	
	-2888 Nov 20 j 11:55	0° Ω		opposition	-2883 Dec 08 j 22:42	25° \mathcal{B} 40'38	3°16'17
	-2888 Dec 31 j 11:10	0° \mathbb{M}		greatest brilliancy	-2883 Dec 08 j 19:54	25° \mathcal{B} 43'27	-1.3m
desc. node	-2887 Jan 21 j 14:13	15° \mathbb{M} 43'05		min. Earth dist.	-2883 Dec 08 j 15:58	25° \mathcal{B} 47'23	0.67201 AU
	-2887 Feb 09 j 16:53	0° \mathcal{A}		direct	-2882 Jan 18 j 10:58	15° \mathcal{B} 54'43	
	-2887 Mar 22 j 02:08	0° \mathcal{B}			-2882 Mar 14 j 21:05	0° Π	
	-2887 May 03 j 06:51	0° \approx			-2882 May 11 j 20:54	0° \mathcal{E}	
	-2887 Jun 20 j 22:50	0° \mathcal{H}			-2882 Jun 29 j 02:25	0° Ω	
retrograde	-2887 Aug 17 j 03:46	17° \mathcal{H} 55'11			-2882 Aug 11 j 21:14	0° \mathbb{M}	
min. Earth dist.	-2887 Sep 17 j 02:10	11° \mathcal{H} 23'13	0.52627 AU	desc. node	-2882 Sep 13 j 10:16	23° \mathbb{M} 44'52	
greatest brilliancy	-2887 Sep 23 j 08:46	9° \mathcal{H} 00'38	-2.0m		-2882 Sep 21 j 18:12	0° Ω	
opposition	-2887 Sep 24 j 10:11	8° \mathcal{H} 36'31	-2°-57'-49	evening set	-2882 Oct 28 j 23:23	28° Ω 35'37	
direct	-2887 Oct 29 j 07:24	0° \mathcal{H} 55'13			-2882 Oct 30 j 18:38	0° \mathbb{M}	
asc. node	-2887 Nov 29 j 06:41	6° \mathcal{H} 13'20			-2882 Dec 07 j 22:12	0° \mathcal{A}	
	-2886 Jan 22 j 15:37	0° Υ					
	-2886 Mar 17 j 14:15	0° \mathcal{B}		conjunction	-2881 Jan 01 j 23:11	19° \mathcal{A} 42'14	-1°-1'-56
	-2886 May 06 j 16:36	0° Π		minimum elong	-2881 Jan 01 j 20:54	19° \mathcal{A} 37'45	1°02'02
	-2886 Jun 23 j 10:53	0° \mathcal{E}			-2881 Jan 15 j 03:39	0° \mathcal{B}	
evening set	-2886 Jul 20 j 07:17	17° \mathcal{E} 31'06		max. Earth dist.	-2881 Feb 15 j 09:33	24° \mathcal{B} 00'32	2.39534 AU
	-2886 Aug 07 j 23:03	0° Ω			-2881 Feb 23 j 08:07	0° \approx	
max. Earth dist.	-2886 Aug 08 j 05:50	0° Ω 11'29	2.56169 AU	morning rise	-2881 Mar 10 j 20:15	11° \approx 32'52	
					-2881 Apr 05 j 05:35	0° \mathcal{H}	
conjunction	-2886 Sep 06 j 15:22	20° Ω 25'02	0°54'20		-2881 May 18 j 09:37	0° Υ	
minimum elong	-2886 Sep 06 j 16:54	20° Ω 27'44	0°54'23		-2881 Jul 03 j 08:56	0° \mathcal{B}	
	-2886 Sep 20 j 05:29	0° \mathbb{M}		asc. node	-2881 Jul 22 j 05:45	11° \mathcal{B} 41'26	
morning rise	-2886 Oct 27 j 08:38	26° \mathbb{M} 55'34			-2881 Aug 22 j 08:57	0° Π	
	-2886 Oct 31 j 12:14	0° Ω			-2881 Oct 22 j 22:04	0° \mathcal{E}	
desc. node	-2886 Dec 09 j 14:11	29° Ω 28'05		retrograde	-2881 Dec 04 j 13:03	9° \mathcal{E} 03'55	
	-2886 Dec 10 j 06:54	0° \mathbb{M}		opposition	-2880 Jan 12 j 11:40	29° Π 59'58	4°42'26
	-2885 Jan 18 j 05:19	0° \mathcal{A}			-2880 Jan 12 j 11:38	30° $\mathcal{R}\mathcal{B}$	
	-2885 Feb 26 j 02:43	0° \mathcal{B}		greatest brilliancy	-2880 Jan 13 j 03:59	29° Π 43'56	-1.3m
	-2885 Apr 06 j 22:52	0° \approx		min. Earth dist.	-2880 Jan 16 j 01:13	28° Π 36'01	0.65224 AU
	-2885 May 19 j 01:58	0° \mathcal{H}		direct	-2880 Feb 22 j 18:10	19° Π 58'52	
	-2885 Jul 05 j 03:25	0° Υ			-2880 Apr 07 j 06:45	0° \mathcal{E}	
	-2885 Sep 18 j 19:01	0° \mathcal{B}			-2880 Jun 04 j 12:32	0° Ω	
retrograde	-2885 Sep 25 j 22:08	0° \mathcal{B} 20'16			-2880 Jul 20 j 15:21	0° \mathbb{M}	
	-2885 Oct 02 j 21:55	30° $\mathcal{R}\mathcal{B}$		desc. node	-2880 Jul 31 j 08:29	7° \mathbb{M} 29'44	
asc. node	-2885 Oct 17 j 06:06	27° Υ 11'12			-2880 Aug 31 j 06:29	0° Ω	
min. Earth dist.	-2885 Oct 31 j 19:46	21° Υ 59'40	0.62791 AU		-2880 Oct 09 j 13:15	0° \mathbb{M}	
opposition	-2885 Nov 04 j 20:49	20° Υ 22'32	0°44'44		-2880 Nov 16 j 20:14	0° \mathcal{A}	
greatest brilliancy	-2885 Nov 04 j 16:30	20° Υ 26'51	-1.5m		-2880 Dec 25 j 05:47	0° \mathcal{B}	
direct	-2885 Dec 13 j 06:08	11° Υ 20'10		evening set	-2879 Jan 05 j 06:59	8° \mathcal{B} 30'55	
	-2884 Feb 16 j 23:31	0° \mathcal{B}			-2879 Feb 02 j 15:59	0° \approx	
	-2884 Apr 14 j 02:41	0° Π					
	-2884 Jun 03 j 00:23	0° \mathcal{E}		conjunction	-2879 Mar 08 j 15:15	24° \approx 52'29	0°-49'-33
	-2884 Jul 19 j 03:41	0° Ω		minimum elong	-2879 Mar 08 j 17:36	24° \approx 56'42	0°49'36
	-2884 Aug 31 j 08:33	0° \mathbb{M}			-2879 Mar 15 j 19:23	0° \mathcal{H}	
evening set	-2884 Sep 01 j 16:55	0° \mathbb{M} 57'55		max. Earth dist.	-2879 Apr 16 j 03:13	21° \mathcal{H} 53'18	2.52530 AU
max. Earth dist.	-2884 Sep 17 j 17:19	12° \mathbb{M} 34'07	2.44191 AU		-2879 Apr 28 j 00:52	0° Υ	
	-2884 Oct 11 j 05:11	0° Ω		morning rise	-2879 May 05 j 01:11	4° Υ 43'43	
				asc. node	-2879 Jun 08 j 04:34	27° Υ 15'24	
conjunction	-2884 Oct 26 j 12:49	11° Ω 36'10	0°00'00		-2879 Jun 12 j 10:17	0° \mathcal{B}	
minimum elong	-2884 Oct 26 j 12:48	11° Ω 36'09	0°00'02		-2879 Jul 29 j 23:13	0° Π	
behind sun begin	-2884 Oct 25 j 15:47	10° Ω 56'07			-2879 Sep 18 j 07:15	0° \mathcal{E}	
behind sun end	-2884 Oct 27 j 09:49	12° Ω 16'12			-2879 Nov 14 j 21:05	0° Ω	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 3

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

retrograde	-2878 Jan 13 j 23:57	16°♏11'58		-2874 Nov 25 j 08:23	0°≈	
opposition	-2878 Feb 19 j 17:30	8°♏14'14	4°41'35	-2873 Jan 11 j 15:55	0°✠	
greatest brilliancy	-2878 Feb 21 j 07:45	7°♏38'38	-1.7m	asc. node	-2873 Jan 28 j 22:48	11°✠01'23
min. Earth dist.	-2878 Feb 26 j 22:41	5°♏33'48	0.56884 AU		-2873 Feb 27 j 19:23	0°Υ
	-2878 Mar 18 j 01:22	30°♐☿			-2873 Apr 16 j 07:27	0°♄
direct	-2878 Mar 31 j 22:51	28°♐42'00		evening set	-2873 May 28 j 16:21	26°♄44'16
	-2878 Apr 15 j 07:42	0°♏			-2873 Jun 02 j 19:58	0°♐
desc. node	-2878 Jun 18 j 08:05	26°♏59'46		max. Earth dist.	-2873 Jul 03 j 01:49	19°♐16'37 2.66044 AU
	-2878 Jun 23 j 09:00	0°♐				
	-2878 Aug 07 j 15:19	0°♊		conjunction	-2873 Jul 14 j 02:40	26°♐22'31 1°08'27
	-2878 Sep 17 j 08:26	0°♌		minimum elong	-2873 Jul 14 j 02:03	26°♐21'30 1°08'32
	-2878 Oct 26 j 11:40	0°♍			-2873 Jul 19 j 17:19	0°☿
	-2878 Dec 04 j 13:52	0°♎		morning rise	-2873 Aug 28 j 06:21	25°☿54'05
	-2877 Jan 13 j 16:02	0°≈			-2873 Sep 03 j 10:14	0°♏
	-2877 Feb 24 j 10:30	0°✠			-2873 Oct 17 j 16:33	0°♐
evening set	-2877 Mar 05 j 09:16	6°✠15'12			-2873 Nov 29 j 13:56	0°♊
	-2877 Apr 09 j 03:35	0°Υ			-2872 Jan 10 j 09:00	0°♌
asc. node	-2877 Apr 26 j 02:24	11°Υ17'55		desc. node	-2872 Feb 08 j 08:43	21°♌04'43
					-2872 Feb 20 j 14:58	0°♍
conjunction	-2877 Apr 27 j 23:07	12°Υ31'52	0°01'06		-2872 Apr 02 j 10:31	0°♎
minimum elong	-2877 Apr 27 j 23:05	12°Υ31'48	0°01'07		-2872 May 17 j 19:08	0°≈
behind sun begin	-2877 Apr 27 j 01:56	11°Υ56'51		retrograde	-2872 Jul 29 j 16:40	27°≈22'36
behind sun end	-2877 Apr 28 j 20:14	13°Υ06'44		min. Earth dist.	-2872 Aug 27 j 11:05	21°≈42'55 0.47601 AU
max. Earth dist.	-2877 May 16 j 15:16	24°Υ47'01	2.62322 AU	greatest brilliancy	-2872 Sep 02 j 18:57	19°≈27'36 -2.2m
	-2877 May 24 j 15:51	0°♄		opposition	-2872 Sep 04 j 11:44	18°≈51'03 -4°-38'-44
morning rise	-2877 Jun 16 j 11:13	14°♄41'18		direct	-2872 Oct 07 j 15:26	11°≈56'19
	-2877 Jul 10 j 12:33	0°♐			-2872 Dec 08 j 19:50	0°✠
	-2877 Aug 27 j 08:15	0°☿		asc. node	-2872 Dec 15 j 21:10	3°✠24'37
	-2877 Oct 15 j 07:02	0°♏			-2871 Feb 03 j 01:59	0°Υ
	-2877 Dec 06 j 01:56	0°♐			-2871 Mar 26 j 00:23	0°♄
	-2876 Feb 10 j 14:44	0°♊			-2871 May 14 j 01:11	0°♐
retrograde	-2876 Mar 10 j 16:38	4°♊35'57			-2871 Jun 30 j 10:11	0°☿
	-2876 Apr 07 j 12:08	30°♐♐		evening set	-2871 Jul 04 j 21:27	2°☿53'29
opposition	-2876 Apr 12 j 10:28	28°♐28'44	1°25'31	max. Earth dist.	-2871 Jul 27 j 15:34	17°☿48'07 2.59900 AU
greatest brilliancy	-2876 Apr 13 j 04:04	28°♐14'47	-2.4m		-2871 Aug 14 j 21:28	0°♏
min. Earth dist.	-2876 Apr 20 j 09:48	25°♐57'34	0.44097 AU			
desc. node	-2876 May 05 j 07:07	22°♐14'20		conjunction	-2871 Aug 21 j 00:39	4°♏09'10 1°04'56
direct	-2876 May 18 j 04:21	21°♐05'53		minimum elong	-2871 Aug 21 j 01:39	4°♏10'54 1°05'00
	-2876 Jun 25 j 08:20	0°♊			-2871 Sep 27 j 08:08	0°♐
	-2876 Aug 17 j 12:56	0°♌		morning rise	-2871 Oct 08 j 03:04	7°♐39'42
	-2876 Sep 29 j 18:00	0°♍			-2871 Nov 07 j 22:33	0°♊
	-2876 Nov 10 j 06:17	0°♎			-2871 Dec 18 j 02:25	0°♌
	-2876 Dec 22 j 03:21	0°≈		desc. node	-2871 Dec 26 j 07:15	6°♌13'16
	-2875 Feb 03 j 07:24	0°✠			-2870 Jan 26 j 10:18	0°♍
asc. node	-2875 Mar 13 j 01:02	25°✠21'50			-2870 Mar 06 j 17:16	0°♎
	-2875 Mar 20 j 01:25	0°Υ			-2870 Apr 16 j 01:46	0°≈
evening set	-2875 Apr 19 j 04:49	19°Υ40'59			-2870 May 29 j 07:28	0°✠
	-2875 May 05 j 04:33	0°♄			-2870 Jul 19 j 17:23	0°Υ
				retrograde	-2870 Sep 11 j 09:20	15°Υ19'35
conjunction	-2875 Jun 06 j 15:54	20°♄47'34	0°44'41	min. Earth dist.	-2870 Oct 15 j 11:18	7°Υ37'20 0.59386 AU
minimum elong	-2875 Jun 06 j 14:38	20°♄45'32	0°44'45	opposition	-2870 Oct 20 j 22:24	5°Υ27'41 0°-32'-53
max. Earth dist.	-2875 Jun 09 j 06:46	22°♄27'51	2.66903 AU	greatest brilliancy	-2870 Oct 20 j 18:38	5°Υ31'25 -1.6m
	-2875 Jun 21 j 02:24	0°♐		asc. node	-2870 Nov 02 j 21:19	0°Υ44'43
morning rise	-2875 Jul 22 j 10:21	19°♐58'59			-2870 Nov 05 j 08:53	30°♐✠
	-2875 Aug 07 j 02:14	0°☿		direct	-2870 Nov 27 j 02:55	26°✠51'37
	-2875 Sep 22 j 16:40	0°♏			-2870 Dec 20 j 17:13	0°Υ
	-2875 Nov 07 j 20:01	0°♐			-2869 Mar 01 j 12:02	0°♄
	-2875 Dec 23 j 21:36	0°♊			-2869 Apr 23 j 15:53	0°♐
	-2874 Feb 08 j 22:52	0°♌			-2869 Jun 11 j 11:42	0°☿
desc. node	-2874 Mar 23 j 08:02	24°♌51'31			-2869 Jul 27 j 07:16	0°♏
	-2874 Apr 02 j 06:07	0°♍		evening set	-2869 Aug 15 j 09:24	13°♏03'03
retrograde	-2874 May 28 j 06:21	16°♍35'37		max. Earth dist.	-2869 Aug 30 j 12:28	23°♏37'46 2.49147 AU
min. Earth dist.	-2874 Jun 25 j 16:14	11°♍58'59	0.37830 AU		-2869 Sep 08 j 11:45	0°♐
opposition	-2874 Jun 28 j 06:25	11°♍16'50	-6°-2'-27			
greatest brilliancy	-2874 Jun 27 j 13:09	11°♍28'33	-2.8m	conjunction	-2869 Oct 05 j 23:46	19°♐58'25 0°25'28
direct	-2874 Jul 28 j 00:53	6°♍18'04		minimum elong	-2869 Oct 06 j 01:07	20°♐00'55 0°25'28
	-2874 Oct 05 j 21:49	0°♎			-2869 Oct 19 j 11:32	0°♊

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 4

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

desc. node	-2869 Nov 13 j 05:37	18°♄44'35		greatest brilliancy	-2863 Feb 04 j 18:39	22°♄11'29	-1.5m
	-2869 Nov 27 j 20:55	0°♌		min. Earth dist.	-2863 Feb 09 j 08:54	20°♄26'24	0.60856 AU
morning rise	-2869 Dec 01 j 23:18	3°♌10'14		direct	-2863 Mar 16 j 09:59	12°♄49'44	
	-2868 Jan 05 j 09:51	0°♊			-2863 May 14 j 16:46	0°♈	
	-2868 Feb 12 j 22:21	0°♊		desc. node	-2863 Jul 05 j 00:16	29°♈54'54	
	-2868 Mar 23 j 07:59	0°♈			-2863 Jul 05 j 03:23	0°♏	
	-2868 May 03 j 14:50	0°♈			-2863 Aug 17 j 06:20	0°♎	
	-2868 Jun 17 j 03:03	0°♏			-2863 Sep 26 j 04:15	0°♌	
	-2868 Aug 07 j 06:46	0°♏			-2863 Nov 03 j 20:23	0°♊	
asc. node	-2868 Sep 19 j 21:56	18°♏16'11			-2863 Dec 12 j 13:49	0°♊	
retrograde	-2868 Oct 16 j 12:49	22°♏21'45			-2862 Jan 21 j 07:46	0°♈	
min. Earth dist.	-2868 Nov 23 j 21:00	13°♏12'02	0.66208 AU	evening set	-2862 Feb 12 j 08:22	16°♈06'51	
opposition	-2868 Nov 25 j 15:29	12°♏29'22	2°25'22		-2862 Mar 03 j 18:34	0°♈	
greatest brilliancy	-2868 Nov 25 j 09:06	12°♏35'46	-1.3m				
direct	-2867 Jan 04 j 11:26	2°♏57'07		conjunction	-2862 Apr 09 j 23:54	25°♏46'52	0°-19'-3
	-2867 Mar 28 j 11:10	0°♏		minimum elong	-2862 Apr 10 j 00:52	25°♏48'31	0°19'04
	-2867 May 20 j 17:31	0°♄			-2862 Apr 16 j 05:27	0°♏	
	-2867 Jul 06 j 21:12	0°♈		max. Earth dist.	-2862 May 05 j 23:55	13°♏12'49	2.59077 AU
	-2867 Aug 19 j 08:36	0°♏		asc. node	-2862 May 12 j 18:37	17°♏41'29	
	-2867 Sep 29 j 04:31	0°♎		morning rise	-2862 May 31 j 23:48	0°♏14'46	
desc. node	-2867 Sep 30 j 03:49	0°♎43'57			-2862 May 31 j 14:41	0°♏	
evening set	-2867 Oct 04 j 15:29	4°♎07'36			-2862 Jul 17 j 14:40	0°♏	
	-2867 Nov 07 j 05:52	0°♌			-2862 Sep 04 j 02:16	0°♄	
max. Earth dist.	-2867 Nov 19 j 21:14	9°♌53'18	2.37736 AU		-2862 Oct 24 j 22:27	0°♈	
					-2862 Dec 22 j 14:25	0°♏	
conjunction	-2867 Dec 05 j 00:26	21°♌47'25	0°-43'-5	retrograde	-2861 Feb 14 j 20:44	13°♏44'45	
minimum elong	-2867 Dec 04 j 21:25	21°♌41'29	0°43'07	opposition	-2861 Mar 21 j 09:37	6°♏48'29	3°18'43
	-2867 Dec 15 j 10:28	0°♊		greatest brilliancy	-2861 Mar 22 j 22:47	6°♏16'29	-2.1m
	-2866 Jan 22 j 16:14	0°♊		min. Earth dist.	-2861 Mar 29 j 22:27	3°♏52'56	0.49274 AU
morning rise	-2866 Feb 11 j 10:31	15°♊16'01			-2861 Apr 12 j 16:54	30°♏	
	-2866 Mar 02 j 20:09	0°♈		direct	-2861 Apr 28 j 12:08	28°♈17'51	
	-2866 Apr 12 j 17:17	0°♈			-2861 May 14 j 13:04	0°♏	
	-2866 May 26 j 00:09	0°♏		desc. node	-2861 May 23 j 00:59	2°♏08'06	
	-2866 Jul 11 j 13:07	0°♏			-2861 Jul 18 j 17:46	0°♎	
asc. node	-2866 Aug 07 j 20:59	16°♏17'54			-2861 Aug 31 j 20:02	0°♌	
	-2866 Sep 01 j 20:07	0°♏			-2861 Oct 11 j 12:32	0°♊	
retrograde	-2866 Nov 20 j 08:28	26°♏02'00			-2861 Nov 20 j 15:51	0°♊	
opposition	-2866 Dec 29 j 20:06	16°♏40'06	4°17'07		-2861 Dec 31 j 14:04	0°♈	
greatest brilliancy	-2866 Dec 30 j 03:41	16°♏32'35	-1.3m		-2860 Feb 12 j 01:03	0°♈	
min. Earth dist.	-2866 Dec 31 j 21:27	15°♏51'11	0.66765 AU		-2860 Mar 27 j 06:48	0°♏	
direct	-2865 Feb 08 j 23:48	6°♏41'22		asc. node	-2860 Mar 29 j 15:55	1°♏34'55	
	-2865 Apr 24 j 03:57	0°♄		evening set	-2860 Apr 02 j 12:15	4°♏07'57	
	-2865 Jun 15 j 03:39	0°♈			-2860 May 12 j 02:20	0°♏	
	-2865 Jul 30 j 00:15	0°♏					
desc. node	-2865 Aug 18 j 01:29	13°♏36'46		conjunction	-2860 May 22 j 13:13	6°♏44'22	0°29'45
	-2865 Sep 09 j 05:44	0°♎		minimum elong	-2860 May 22 j 12:09	6°♏42'40	0°29'48
	-2865 Oct 18 j 08:40	0°♌		max. Earth dist.	-2860 May 31 j 00:16	12°♏10'25	2.65763 AU
	-2865 Nov 25 j 13:11	0°♊			-2860 Jun 27 j 22:02	0°♏	
greatest brilliancy	-2865 Dec 05 j 03:03	7°♊32'29	1.2m	morning rise	-2860 Jul 08 j 09:06	6°♏39'22	
evening set	-2865 Dec 10 j 05:51	11°♊33'53			-2860 Aug 14 j 03:01	0°♄	
	-2864 Jan 02 j 19:59	0°♊			-2860 Sep 30 j 09:11	0°♈	
	-2864 Feb 11 j 02:35	0°♈			-2860 Nov 16 j 22:08	0°♏	
					-2859 Jan 04 j 21:39	0°♎	
conjunction	-2864 Feb 13 j 14:18	1°♈51'46	-1°-3'-13		-2859 Feb 28 j 23:51	0°♌	
minimum elong	-2864 Feb 13 j 16:06	1°♈55'07	1°03'18	desc. node	-2859 Apr 09 j 00:41	13°♌54'29	
	-2864 Mar 23 j 02:05	0°♈		retrograde	-2859 Apr 26 j 12:17	15°♌44'04	
max. Earth dist.	-2864 Mar 30 j 22:52	5°♈35'25	2.47502 AU	opposition	-2859 May 26 j 22:21	10°♌40'31	-3°-22'-3
morning rise	-2864 Apr 15 j 09:24	16°♈24'33		greatest brilliancy	-2859 May 27 j 08:20	10°♌33'48	-2.8m
	-2864 May 05 j 05:07	0°♏		min. Earth dist.	-2859 May 29 j 21:16	9°♌52'44	0.38265 AU
	-2864 Jun 19 j 16:43	0°♏		direct	-2859 Jun 27 j 01:36	5°♌17'01	
asc. node	-2864 Jun 24 j 19:57	3°♏17'14			-2859 Sep 04 j 21:38	0°♊	
	-2864 Aug 06 j 20:02	0°♏			-2859 Oct 22 j 19:09	0°♊	
	-2864 Sep 28 j 08:03	0°♄			-2859 Dec 06 j 17:26	0°♈	
	-2864 Dec 13 j 17:06	0°♈			-2858 Jan 20 j 17:21	0°♈	
retrograde	-2864 Dec 27 j 17:25	1°♈08'43		asc. node	-2858 Feb 14 j 13:50	16°♈19'23	
	-2863 Jan 10 j 02:57	30°♏			-2858 Mar 07 j 15:20	0°♏	
opposition	-2863 Feb 03 j 11:48	22°♏40'59	4°55'59		-2858 Apr 23 j 11:10	0°♏	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 5

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

evening set	-2858 May 13 j 18:37	12°♄54'42			-2853 Apr 01 j 13:45	0°♁	
	-2858 Jun 09 j 16:06	0°♂			-2853 May 13 j 06:15	0°♂	
max. Earth dist.	-2858 Jun 23 j 21:47	9°♂04'06	2.67022 AU		-2853 Jun 27 j 23:52	0°♂	
					-2853 Aug 24 j 17:53	0°♂	
conjunction	-2858 Jun 29 j 16:15	12°♂45'12	1°02'05	retrograde	-2853 Oct 03 j 22:14	8°♄51'01	
minimum elong	-2858 Jun 29 j 15:12	12°♂43'31	1°02'10	asc. node	-2853 Oct 07 j 12:22	8°♄45'48	
	-2858 Jul 26 j 13:00	0°♄		min. Earth dist.	-2853 Nov 09 j 18:07	0°♄11'38	0.64266 AU
morning rise	-2858 Aug 13 j 16:51	11°♄46'09			-2853 Nov 10 j 05:45	30°♄	
	-2858 Sep 10 j 12:06	0°♂		opposition	-2853 Nov 12 j 23:52	28°♂53'39	1°24'46
	-2858 Oct 25 j 07:49	0°♄		greatest brilliancy	-2853 Nov 12 j 17:25	29°♂00'07	-1.4m
	-2858 Dec 08 j 02:16	0°♂		direct	-2853 Dec 21 j 23:00	19°♂39'14	
	-2857 Jan 20 j 02:55	0°♂			-2852 Feb 06 j 05:41	0°♂	
desc. node	-2857 Feb 25 j 00:32	25°♂04'36			-2852 Apr 08 j 00:10	0°♂	
	-2857 Mar 04 j 03:21	0°♄			-2852 May 28 j 21:14	0°♄	
	-2857 Apr 18 j 05:31	0°♄			-2852 Jul 14 j 08:35	0°♂	
	-2857 Jun 18 j 06:04	0°♁			-2852 Aug 26 j 15:50	0°♄	
retrograde	-2857 Jul 09 j 07:07	2°♁59'55		evening set	-2852 Sep 13 j 00:10	12°♄32'53	
	-2857 Jul 29 j 23:48	30°♄		max. Earth dist.	-2852 Oct 02 j 19:17	27°♄12'46	2.41473 AU
min. Earth dist.	-2857 Aug 05 j 06:24	28°♄09'33	0.42719 AU		-2852 Oct 06 j 12:23	0°♂	
greatest brilliancy	-2857 Aug 10 j 22:17	26°♄20'19	-2.5m	desc. node	-2852 Oct 16 j 20:40	7°♄49'32	
opposition	-2857 Aug 12 j 21:48	25°♄41'39	-6°-7'-52				
direct	-2857 Sep 13 j 08:29	19°♄40'54		conjunction	-2852 Nov 09 j 01:13	25°♄38'06	0°-16'-5
	-2857 Oct 27 j 04:02	0°♁		minimum elong	-2852 Nov 09 j 00:01	25°♄35'47	0°16'08
	-2857 Dec 25 j 00:13	0°♂		behind sun begin	-2852 Nov 08 j 20:00	25°♄28'00	
asc. node	-2856 Jan 02 j 13:06	4°♄54'52		behind sun end	-2852 Nov 09 j 04:02	25°♄43'34	
	-2856 Feb 13 j 18:09	0°♂			-2852 Nov 14 j 16:09	0°♂	
	-2856 Apr 02 j 21:37	0°♄			-2852 Dec 22 j 23:09	0°♄	
	-2856 May 21 j 04:28	0°♂		morning rise	-2851 Jan 13 j 03:58	16°♄38'51	
evening set	-2856 Jun 19 j 22:18	18°♂49'47			-2851 Jan 30 j 06:35	0°♄	
	-2856 Jul 07 j 07:23	0°♄			-2851 Mar 10 j 11:25	0°♁	
max. Earth dist.	-2856 Jul 17 j 05:20	6°♄26'19	2.62911 AU		-2851 Apr 20 j 09:52	0°♂	
					-2851 Jun 02 j 22:46	0°♂	
conjunction	-2856 Aug 05 j 10:24	19°♄03'45	1°10'04		-2851 Jul 20 j 10:58	0°♄	
minimum elong	-2856 Aug 05 j 10:45	19°♄04'20	1°10'09	asc. node	-2851 Aug 24 j 12:39	19°♄33'18	
	-2856 Aug 21 j 19:43	0°♂			-2851 Sep 15 j 11:48	0°♂	
morning rise	-2856 Sep 20 j 20:22	20°♂28'38		retrograde	-2851 Nov 06 j 16:01	13°♂11'43	
	-2856 Oct 04 j 12:36	0°♄		opposition	-2851 Dec 16 j 12:48	3°♂35'11	3°41'24
	-2856 Nov 15 j 12:44	0°♄		greatest brilliancy	-2851 Dec 16 j 13:07	3°♂34'52	-1.2m
	-2856 Dec 26 j 04:23	0°♂		min. Earth dist.	-2851 Dec 17 j 02:03	3°♂21'57	0.67330 AU
desc. node	-2855 Jan 12 j 00:22	12°♂37'41			-2851 Dec 25 j 17:52	30°♄	
	-2855 Feb 04 j 00:47	0°♄		direct	-2850 Jan 26 j 08:11	23°♄43'29	
	-2855 Mar 15 j 21:57	0°♄			-2850 Mar 02 j 03:20	0°♂	
	-2855 Apr 26 j 04:14	0°♁			-2850 May 05 j 13:05	0°♄	
	-2855 Jun 10 j 18:45	0°♂			-2850 Jun 23 j 19:50	0°♂	
retrograde	-2855 Aug 26 j 18:15	28°♄45'05			-2850 Aug 06 j 22:55	0°♄	
min. Earth dist.	-2855 Sep 27 j 20:39	21°♄46'39	0.55224 AU	desc. node	-2850 Sep 03 j 19:40	20°♄11'49	
opposition	-2855 Oct 04 j 14:47	19°♄10'04	-2°-1'-57		-2850 Sep 16 j 22:47	0°♄	
greatest brilliancy	-2855 Oct 03 j 22:15	19°♄26'02	-1.8m		-2850 Oct 25 j 23:54	0°♂	
direct	-2855 Nov 09 j 09:34	11°♄06'52		evening set	-2850 Nov 12 j 20:05	13°♂59'33	
asc. node	-2855 Nov 19 j 12:43	11°♄44'43			-2850 Dec 03 j 03:15	0°♄	
	-2854 Jan 13 j 14:59	0°♂			-2849 Jan 10 j 08:28	0°♄	
	-2854 Mar 11 j 15:07	0°♄					
	-2854 May 01 j 14:38	0°♂		conjunction	-2849 Jan 17 j 21:23	5°♄50'57	-1°-6'-28
	-2854 Jun 18 j 17:12	0°♄		minimum elong	-2849 Jan 17 j 20:41	5°♄49'34	1°06'33
evening set	-2854 Jul 29 j 12:15	26°♄44'54			-2849 Feb 18 j 12:49	0°♁	
	-2854 Aug 03 j 08:08	0°♂		max. Earth dist.	-2849 Mar 08 j 19:10	13°♁35'08	2.42234 AU
max. Earth dist.	-2854 Aug 15 j 16:49	8°♂24'53	2.53823 AU	morning rise	-2849 Mar 25 j 00:37	25°♁24'43	
	-2854 Sep 15 j 14:14	0°♄			-2849 Mar 31 j 09:52	0°♂	
					-2849 May 13 j 12:15	0°♂	
conjunction	-2854 Sep 16 j 18:48	0°♄50'51	0°45'30		-2849 Jun 28 j 05:06	0°♄	
minimum elong	-2854 Sep 16 j 20:28	0°♄53'49	0°45'32	asc. node	-2849 Jul 12 j 11:19	8°♄58'15	
	-2854 Oct 26 j 18:54	0°♄			-2849 Aug 16 j 07:28	0°♂	
morning rise	-2854 Nov 08 j 09:25	9°♄26'02			-2849 Oct 11 j 21:08	0°♄	
desc. node	-2854 Nov 29 j 22:55	25°♄48'01		retrograde	-2849 Dec 13 j 00:23	17°♄11'08	
	-2854 Dec 05 j 10:27	0°♂		opposition	-2848 Jan 20 j 14:35	8°♄18'50	4°51'21
	-2853 Jan 13 j 05:15	0°♄		greatest brilliancy	-2848 Jan 21 j 12:06	7°♄57'52	-1.4m
	-2853 Feb 20 j 22:50	0°♄		min. Earth dist.	-2848 Jan 25 j 00:19	6°♄36'01	0.63955 AU

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 6

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2848 Feb 14 j 19:25	30° RII			-2843 Apr 30 j 12:06	0° B		
direct	-2848 Mar 01 j 20:37	28° II 19'06						
	-2848 Mar 18 j 16:51	0° S		conjunction	-2843 Jun 15 j 03:09	29° B 08'08	0°52'02	
	-2848 May 28 j 12:38	0° Q		minimum elong	-2843 Jun 15 j 01:52	29° B 06'06	0°52'06	
	-2848 Jul 14 j 23:10	0° M		max. Earth dist.	-2843 Jun 14 j 15:46	28° B 49'59	2.67169 AU	
desc. node	-2848 Jul 21 j 18:31	4° M 40'22			-2843 Jun 16 j 11:42	0° II		
	-2848 Aug 26 j 00:55	0° A		morning rise	-2843 Jul 30 j 12:25	28° II 08'21		
	-2848 Oct 04 j 12:20	0° M			-2843 Aug 02 j 09:58	0° S		
	-2848 Nov 11 j 21:46	0° A			-2843 Sep 17 j 18:04	0° Q		
	-2848 Dec 20 j 09:08	0° S			-2843 Nov 02 j 08:26	0° M		
evening set	-2847 Jan 19 j 17:36	23° S 09'28			-2843 Dec 17 j 09:56	0° A		
	-2847 Jan 28 j 20:51	0° \approx			-2842 Jan 31 j 12:37	0° M		
	-2847 Mar 11 j 01:26	0° K		desc. node	-2842 Mar 13 j 17:43	26° M 30'51		
					-2842 Mar 19 j 09:57	0° A		
conjunction	-2847 Mar 21 j 01:25	7° K 04'00	0°-39'-4		-2842 May 18 j 13:33	0° S		
minimum elong	-2847 Mar 21 j 03:26	7° K 07'32	0°39'05	retrograde	-2842 Jun 13 j 18:02	4° S 22'55		
	-2847 Apr 23 j 07:34	0° Y			-2842 Jul 10 j 11:55	30° R A		
max. Earth dist.	-2847 Apr 24 j 00:04	0° Y 27'55	2.55047 AU	min. Earth dist.	-2842 Jul 10 j 15:27	29° A 57'32	0.38933 AU	
morning rise	-2847 May 15 j 08:04	14° Y 44'20		greatest brilliancy	-2842 Jul 14 j 08:59	28° A 54'06	-2.8m	
asc. node	-2847 May 29 j 09:29	23° Y 59'02		opposition	-2842 Jul 15 j 19:24	28° A 29'36	-6°-37'-42	
	-2847 Jun 07 j 15:29	0° B		direct	-2842 Aug 14 j 17:08	23° A 18'14		
	-2847 Jul 24 j 21:54	0° II			-2842 Sep 17 j 16:35	0° S		
	-2847 Sep 12 j 09:22	0° S			-2842 Nov 16 j 19:52	0° \approx		
	-2847 Nov 05 j 12:01	0° Q			-2841 Jan 05 j 08:12	0° K		
retrograde	-2846 Jan 24 j 18:04	25° Q 53'52		asc. node	-2841 Jan 19 j 04:29	8° K 36'23		
opposition	-2846 Mar 01 j 19:18	18° Q 15'55	4°21'17		-2841 Feb 22 j 10:32	0° Y		
greatest brilliancy	-2846 Mar 03 j 11:44	17° Q 39'09	-1.8m		-2841 Apr 11 j 10:02	0° B		
min. Earth dist.	-2846 Mar 09 j 16:03	15° Q 25'00	0.54332 AU		-2841 May 29 j 04:11	0° II		
direct	-2846 Apr 10 j 11:03	9° Q 00'25		evening set	-2841 Jun 06 j 03:36	5° II 02'53		
desc. node	-2846 Jun 08 j 17:16	27° Q 09'06		max. Earth dist.	-2841 Jul 08 j 13:03	25° II 44'31	2.65139 AU	
	-2846 Jun 14 j 01:28	0° M			-2841 Jul 15 j 03:20	0° S		
	-2846 Jul 31 j 21:42	0° A						
	-2846 Sep 11 j 10:24	0° M		conjunction	-2841 Jul 22 j 11:52	4° S 46'19	1°10'19	
	-2846 Oct 20 j 23:25	0° A		minimum elong	-2841 Jul 22 j 11:35	4° S 45'50	1°10'25	
	-2846 Nov 29 j 08:23	0° S			-2841 Aug 29 j 18:24	0° Q		
	-2845 Jan 08 j 15:54	0° \approx		morning rise	-2841 Sep 05 j 22:46	4° Q 49'00		
	-2845 Feb 19 j 14:29	0° K			-2841 Oct 12 j 19:38	0° M		
evening set	-2845 Mar 16 j 09:48	17° K 07'58			-2841 Nov 24 j 08:36	0° A		
	-2845 Apr 04 j 10:39	0° Y			-2840 Jan 04 j 16:32	0° M		
asc. node	-2845 Apr 16 j 08:34	7° Y 56'42		desc. node	-2840 Jan 29 j 16:50	18° M 26'17		
					-2840 Feb 14 j 07:49	0° A		
conjunction	-2845 May 07 j 13:52	21° Y 54'43	0°12'12		-2840 Mar 26 j 05:18	0° S		
minimum elong	-2845 May 07 j 13:21	21° Y 53'51	0°12'13		-2840 May 08 j 08:34	0° \approx		
behind sun begin	-2845 May 07 j 00:02	21° Y 32'06			-2840 Jun 30 j 06:56	0° K		
behind sun end	-2845 May 08 j 02:40	22° Y 15'36		retrograde	-2840 Aug 09 j 11:01	9° K 50'04		
	-2845 May 20 j 00:12	0° B		min. Earth dist.	-2840 Sep 08 j 10:00	3° K 41'39	0.50406 AU	
max. Earth dist.	-2845 May 22 j 13:01	1° B 38'27	2.63760 AU	greatest brilliancy	-2840 Sep 14 j 19:38	1° K 19'40	-2.1m	
morning rise	-2845 Jun 24 j 23:38	23° B 06'38		opposition	-2840 Sep 16 j 04:03	0° K 49'37	-3°-41'00	
	-2845 Jul 05 j 19:29	0° II			-2840 Sep 18 j 10:15	30° R \approx		
	-2845 Aug 22 j 08:34	0° S		direct	-2840 Oct 20 j 07:22	23° \approx 28'05		
	-2845 Oct 09 j 13:27	0° Q			-2840 Nov 23 j 21:33	0° K		
	-2845 Nov 28 j 07:57	0° M		asc. node	-2840 Dec 06 j 04:09	4° K 35'00		
	-2844 Jan 22 j 18:31	0° A			-2839 Jan 27 j 01:46	0° Y		
retrograde	-2844 Mar 26 j 09:19	18° A 27'27			-2839 Mar 20 j 13:02	0° B		
desc. node	-2844 Apr 25 j 17:06	13° A 14'51			-2839 May 09 j 03:55	0° II		
opposition	-2844 Apr 27 j 05:27	12° A 47'47	0°-6'-4		-2839 Jun 25 j 18:53	0° S		
greatest brilliancy	-2844 Mar 10 j 22:04	17° A 02'02	-3.0m	evening set	-2839 Jul 13 j 15:01	11° S 35'09		
min. Earth dist.	-2844 May 04 j 02:06	10° A 45'13	0.41518 AU	max. Earth dist.	-2839 Aug 03 j 02:44	25° S 09'28	2.57923 AU	
direct	-2844 May 31 j 06:46	6° A 10'04			-2839 Aug 10 j 07:37	0° Q		
	-2844 Aug 06 j 13:36	0° M						
	-2844 Sep 22 j 00:07	0° A		conjunction	-2839 Aug 30 j 08:10	13° Q 39'56	0°59'31	
	-2844 Nov 03 j 19:22	0° S		minimum elong	-2839 Aug 30 j 09:31	13° Q 42'16	0°59'34	
	-2844 Dec 16 j 10:39	0° \approx			-2839 Sep 22 j 16:55	0° M		
	-2843 Jan 29 j 02:25	0° K		morning rise	-2839 Oct 18 j 18:21	18° M 42'47		
asc. node	-2843 Mar 03 j 06:39	22° K 10'09			-2839 Nov 03 j 03:44	0° A		
	-2843 Mar 15 j 04:20	0° Y			-2839 Dec 13 j 02:52	0° M		
evening set	-2843 Apr 28 j 08:07	28° Y 36'39		desc. node	-2839 Dec 16 j 16:34	2° M 43'15		

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 7

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2838 Jan 21 j 05:16	0°♂		greatest brilliancy	-2833 Jan 07 j 03:18	24°♂30'22	-1.3m
	-2838 Mar 01 j 06:11	0°♂		min. Earth dist.	-2833 Jan 09 j 12:45	23°♂33'47	0.66045 AU
	-2838 Apr 10 j 06:10	0°♂		direct	-2833 Feb 16 j 21:28	14°♂41'44	
	-2838 May 22 j 16:50	0°♂			-2833 Apr 15 j 01:43	0°♂	
	-2838 Jul 09 j 23:07	0°♂			-2833 Jun 09 j 03:13	0°♂	
retrograde	-2838 Sep 19 j 20:08	24°♂30'03			-2833 Jul 24 j 17:32	0°♂	
asc. node	-2838 Oct 24 j 03:57	16°♂44'40		desc. node	-2833 Aug 08 j 10:54	10°♂23'39	
min. Earth dist.	-2838 Oct 24 j 23:06	16°♂25'47	0.61386 AU		-2833 Sep 04 j 05:16	0°♂	
opposition	-2838 Oct 29 j 15:22	14°♂33'58	0°13'30		-2833 Oct 13 j 10:53	0°♂	
greatest brilliancy	-2838 Oct 29 j 13:48	14°♂35'31	-1.6m		-2833 Nov 20 j 16:40	0°♂	
direct	-2838 Dec 06 j 12:51	5°♂42'28		evening set	-2833 Dec 25 j 16:06	27°♂24'08	
	-2837 Feb 21 j 21:01	0°♂			-2833 Dec 29 j 00:25	0°♂	
	-2837 Apr 18 j 02:37	0°♂			-2832 Feb 06 j 08:06	0°♂	
	-2837 Jun 06 j 13:45	0°♂					
	-2837 Jul 22 j 14:53	0°♂		conjunction	-2832 Feb 27 j 13:16	15°♂41'54	0°-56'-18
evening set	-2837 Aug 25 j 13:40	23°♂23'52		minimum elong	-2832 Feb 27 j 15:37	15°♂46'13	0°56'22
	-2837 Sep 03 j 20:53	0°♂			-2832 Mar 18 j 08:23	0°♂	
max. Earth dist.	-2837 Sep 09 j 13:04	4°♂04'05	2.46434 AU	max. Earth dist.	-2832 Apr 09 j 15:37	15°♂42'23	2.50343 AU
	-2837 Oct 14 j 19:54	0°♂		morning rise	-2832 Apr 26 j 20:49	27°♂33'01	
					-2832 Apr 30 j 11:22	0°♂	
conjunction	-2837 Oct 17 j 19:55	2°♂15'10	0°11'32		-2832 Jun 14 j 19:59	0°♂	
minimum elong	-2837 Oct 17 j 20:38	2°♂16'31	0°11'32	asc. node	-2832 Jun 15 j 02:17	0°♂10'10	
behind sun begin	-2837 Oct 17 j 03:31	1°♂44'21			-2832 Aug 01 j 13:04	0°♂	
behind sun end	-2837 Oct 18 j 13:46	2°♂48'42			-2832 Sep 21 j 14:06	0°♂	
desc. node	-2837 Nov 03 j 15:22	14°♂59'44			-2832 Nov 21 j 23:29	0°♂	
	-2837 Nov 23 j 03:28	0°♂		retrograde	-2831 Jan 06 j 07:58	10°♂01'39	
morning rise	-2837 Dec 16 j 16:31	18°♂20'05		opposition	-2831 Feb 12 j 13:40	1°♂49'45	4°49'57
	-2837 Dec 31 j 13:59	0°♂		greatest brilliancy	-2831 Feb 14 j 01:02	1°♂16'27	-1.6m
greatest brilliancy	-2836 Jan 25 j 16:31	19°♂38'48	1.2m		-2831 Feb 17 j 10:10	30°♂♂	
	-2836 Feb 07 j 23:54	0°♂		min. Earth dist.	-2831 Feb 19 j 05:38	29°♂19'29	0.58774 AU
	-2836 Mar 18 j 06:39	0°♂		direct	-2831 Mar 25 j 04:27	22°♂07'21	
	-2836 Apr 28 j 08:24	0°♂			-2831 May 01 j 19:16	0°♂	
	-2836 Jun 11 j 08:22	0°♂		desc. node	-2831 Jun 25 j 10:22	28°♂17'42	
	-2836 Jul 30 j 14:28	0°♂			-2831 Jun 28 j 03:52	0°♂	
asc. node	-2836 Sep 10 j 02:57	20°♂16'04			-2831 Aug 11 j 09:29	0°♂	
	-2836 Oct 16 j 23:30	0°♂			-2831 Sep 20 j 17:57	0°♂	
retrograde	-2836 Oct 24 j 06:09	0°♂20'05			-2831 Oct 29 j 15:42	0°♂	
	-2836 Oct 31 j 09:05	30°♂♂			-2831 Dec 07 j 13:02	0°♂	
min. Earth dist.	-2836 Dec 02 j 09:43	20°♂54'49	0.66890 AU		-2830 Jan 16 j 10:22	0°♂	
opposition	-2836 Dec 03 j 08:09	20°♂32'20	2°56'12	evening set	-2830 Feb 24 j 13:42	28°♂17'16	
greatest brilliancy	-2836 Dec 03 j 03:23	20°♂37'06	-1.3m		-2830 Feb 26 j 23:53	0°♂	
direct	-2835 Jan 12 j 14:01	10°♂51'52			-2830 Apr 11 j 12:53	0°♂	
	-2835 Mar 20 j 07:52	0°♂					
	-2835 May 15 j 01:11	0°♂		conjunction	-2830 Apr 20 j 10:45	5°♂58'48	0°-7'-20
	-2835 Jul 01 j 20:25	0°♂		minimum elong	-2830 Apr 20 j 11:06	5°♂59'22	0°07'21
	-2835 Aug 14 j 13:20	0°♂		behind sun begin	-2830 Apr 19 j 15:32	5°♂26'42	
desc. node	-2835 Sep 20 j 12:51	27°♂03'20		behind sun end	-2830 Apr 21 j 06:39	6°♂32'01	
	-2835 Sep 24 j 10:53	0°♂		asc. node	-2830 May 03 j 00:08	14°♂19'34	
evening set	-2835 Oct 18 j 00:36	17°♂58'49		max. Earth dist.	-2830 May 12 j 08:31	20°♂28'55	2.60971 AU
	-2835 Nov 02 j 12:26	0°♂			-2830 May 26 j 22:31	0°♂	
	-2835 Dec 10 j 16:33	0°♂		morning rise	-2830 Jun 09 j 23:35	9°♂04'23	
					-2830 Jul 12 j 19:41	0°♂	
conjunction	-2835 Dec 20 j 14:43	7°♂49'22	0°-55'-15		-2830 Aug 29 j 20:58	0°♂	
minimum elong	-2835 Dec 20 j 11:41	7°♂43'24	0°55'19		-2830 Oct 18 j 11:53	0°♂	
max. Earth dist.	-2834 Jan 16 j 14:21	28°♂58'56	2.37880 AU		-2830 Dec 11 j 09:02	0°♂	
	-2834 Jan 17 j 21:43	0°♂		retrograde	-2829 Feb 28 j 10:08	25°♂35'03	
	-2834 Feb 26 j 01:05	0°♂		opposition	-2829 Apr 02 j 23:14	19°♂05'09	2°21'01
morning rise	-2834 Feb 27 j 06:01	0°♂54'23		greatest brilliancy	-2829 Apr 04 j 03:32	18°♂41'45	-2.3m
	-2834 Apr 07 j 20:54	0°♂		min. Earth dist.	-2829 Apr 11 j 08:43	16°♂19'15	0.46381 AU
	-2834 May 21 j 00:18	0°♂		direct	-2829 May 09 j 20:36	11°♂09'04	
	-2834 Jul 06 j 02:36	0°♂		desc. node	-2829 May 13 j 09:27	11°♂14'19	
asc. node	-2834 Jul 29 j 02:47	14°♂04'41			-2829 Jul 07 j 15:41	0°♂	
	-2834 Aug 25 j 19:14	0°♂			-2829 Aug 24 j 05:42	0°♂	
	-2834 Nov 01 j 16:41	0°♂			-2829 Oct 05 j 02:41	0°♂	
retrograde	-2834 Nov 28 j 09:31	3°♂54'56			-2829 Nov 14 j 21:33	0°♂	
	-2834 Dec 23 j 01:49	30°♂♂			-2829 Dec 26 j 06:31	0°♂	
opposition	-2833 Jan 06 j 14:59	24°♂42'31	4°32'59		-2828 Feb 07 j 01:04	0°♂	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 8

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

asc. node	-2828 Mar 19 j 22:22	28° K 17'26		desc. node	-2823 Jan 02 j 09:51	9° M 20'48	
	-2828 Mar 22 j 12:14	0° Y			-2823 Jan 29 j 13:59	0° Z	
evening set	-2828 Apr 12 j 04:20	13° Y 35'59			-2823 Mar 10 j 02:10	0° Z	
	-2828 May 07 j 10:52	0° B			-2823 Apr 19 j 17:41	0° \approx	
					-2823 Jun 02 j 15:38	0° K	
conjunction	-2828 May 31 j 06:48	15° B 18'14	0°38'46		-2823 Jul 27 j 22:40	0° Y	
minimum elong	-2828 May 31 j 05:34	15° B 16'15	0°38'49	retrograde	-2823 Sep 04 j 21:23	8° Y 52'44	
max. Earth dist.	-2828 Jun 05 j 10:53	18° B 36'37	2.66497 AU	min. Earth dist.	-2823 Oct 08 j 02:18	1° Y 29'25	0.57608 AU
	-2828 Jun 23 j 07:18	0° II			-2823 Oct 11 j 21:43	30° R K	
morning rise	-2828 Jul 16 j 11:17	14° II 45'26		opposition	-2823 Oct 14 j 03:49	29° K 06'50	-1°-9'-6
	-2828 Aug 09 j 09:11	0° S		greatest brilliancy	-2823 Oct 13 j 19:11	29° K 15'18	-1.7m
	-2828 Sep 25 j 06:06	0° Q		asc. node	-2823 Nov 09 j 18:22	21° K 23'56	
	-2828 Nov 10 j 22:51	0° M		direct	-2823 Nov 19 j 18:25	20° K 44'25	
	-2828 Dec 28 j 01:39	0° A			-2822 Jan 01 j 14:34	0° Y	
	-2827 Feb 15 j 10:40	0° M			-2822 Mar 05 j 04:54	0° B	
desc. node	-2827 Mar 30 j 09:36	22° M 11'27			-2822 Apr 26 j 09:02	0° II	
	-2827 Apr 21 j 06:00	0° Z			-2822 Jun 13 j 22:10	0° S	
retrograde	-2827 May 14 j 15:04	3° Z 19'43			-2822 Jul 29 j 16:49	0° Q	
	-2827 Jun 07 j 10:38	30° R M		evening set	-2822 Aug 07 j 23:39	6° Q 17'55	
opposition	-2827 Jun 14 j 02:21	28° M 16'00	-5°-5'-28	max. Earth dist.	-2822 Aug 23 j 17:23	17° Q 09'00	2.51301 AU
greatest brilliancy	-2827 Jun 14 j 00:01	28° M 17'33	-2.9m		-2822 Sep 10 j 23:16	0° M	
min. Earth dist.	-2827 Jun 13 j 23:18	28° M 18'02	0.37617 AU				
direct	-2827 Jul 14 j 05:43	23° M 14'22		conjunction	-2822 Sep 27 j 10:17	11° M 50'33	0°34'46
	-2827 Aug 16 j 16:55	0° Z		minimum elong	-2822 Sep 27 j 11:53	11° M 53'26	0°34'46
	-2827 Oct 13 j 13:24	0° Z			-2822 Oct 22 j 02:03	0° A	
	-2827 Nov 29 j 21:19	0° \approx		desc. node	-2822 Nov 20 j 07:55	22° A 06'22	
	-2826 Jan 15 j 00:00	0° K		morning rise	-2822 Nov 21 j 07:18	22° A 51'06	
asc. node	-2826 Feb 04 j 20:13	13° K 29'38			-2822 Nov 30 j 14:48	0° M	
	-2826 Mar 02 j 12:33	0° Y			-2821 Jan 08 j 06:27	0° Z	
	-2826 Apr 18 j 16:23	0° B			-2821 Feb 15 j 20:43	0° Z	
evening set	-2826 May 22 j 08:50	21° B 19'14			-2821 Mar 27 j 07:41	0° \approx	
	-2826 Jun 05 j 01:19	0° II			-2821 May 07 j 16:37	0° K	
max. Earth dist.	-2826 Jun 29 j 06:35	15° II 25'43	2.66591 AU		-2821 Jun 21 j 12:56	0° Y	
					-2821 Aug 13 j 10:02	0° B	
conjunction	-2826 Jul 07 j 22:34	20° II 58'53	1°06'14	asc. node	-2821 Sep 27 j 18:56	15° B 53'38	
minimum elong	-2826 Jul 07 j 21:44	20° II 57'33	1°06'19	retrograde	-2821 Oct 11 j 19:13	17° B 07'12	
	-2826 Jul 21 j 22:46	0° S		min. Earth dist.	-2821 Nov 18 j 11:54	8° B 10'23	0.65456 AU
morning rise	-2826 Aug 21 j 23:15	20° S 12'37		opposition	-2821 Nov 20 j 21:54	7° B 12'08	2°01'19
	-2826 Sep 05 j 18:53	0° Q		greatest brilliancy	-2821 Nov 20 j 14:56	7° B 19'09	-1.3m
	-2826 Oct 20 j 07:41	0° M			-2821 Dec 11 j 21:53	30° R Y	
	-2826 Dec 02 j 14:15	0° A		direct	-2821 Dec 30 j 09:08	27° Y 47'12	
	-2825 Jan 13 j 21:31	0° M			-2820 Jan 19 j 03:55	0° B	
desc. node	-2825 Feb 15 j 10:55	23° M 19'23			-2820 Apr 01 j 09:02	0° II	
	-2825 Feb 24 j 18:58	0° Z			-2820 May 23 j 14:02	0° S	
	-2825 Apr 08 j 15:19	0° Z			-2820 Jul 09 j 11:50	0° Q	
	-2825 May 26 j 22:36	0° \approx			-2820 Aug 21 j 22:55	0° M	
retrograde	-2825 Jul 21 j 20:19	17° \approx 45'18		evening set	-2820 Sep 24 j 22:20	24° M 49'19	
min. Earth dist.	-2825 Aug 18 j 17:35	12° \approx 29'12	0.45342 AU		-2820 Oct 01 j 20:06	0° A	
greatest brilliancy	-2825 Aug 24 j 21:19	10° \approx 22'42	-2.4m	desc. node	-2820 Oct 07 j 06:13	4° A 05'31	
opposition	-2825 Aug 26 j 18:54	9° \approx 43'22	-5°-20'-43	max. Earth dist.	-2820 Oct 23 j 13:49	16° A 32'33	2.39101 AU
direct	-2825 Sep 28 j 03:20	3° \approx 12'19			-2820 Nov 09 j 23:09	0° M	
	-2825 Dec 16 j 06:32	0° K					
asc. node	-2825 Dec 23 j 18:23	3° K 58'58		conjunction	-2820 Nov 23 j 08:14	10° M 27'15	0°-31'-53
	-2824 Feb 07 j 14:56	0° Y		minimum elong	-2820 Nov 23 j 05:52	10° M 22'35	0°31'56
	-2824 Mar 28 j 16:47	0° B			-2820 Dec 18 j 04:51	0° Z	
	-2824 May 16 j 09:41	0° II			-2819 Jan 25 j 10:48	0° Z	
evening set	-2824 Jun 28 j 11:10	27° II 16'29		morning rise	-2819 Jan 29 j 16:52	3° Z 18'18	
	-2824 Jul 02 j 16:40	0° S			-2819 Mar 05 j 14:12	0° \approx	
max. Earth dist.	-2824 Jul 23 j 04:35	13° S 21'12	2.61347 AU		-2819 Apr 15 j 10:27	0° K	
					-2819 May 28 j 17:49	0° Y	
conjunction	-2824 Aug 14 j 05:41	27° S 59'44	1°07'43		-2819 Jul 14 j 13:02	0° B	
minimum elong	-2824 Aug 14 j 06:26	28° S 00'59	1°07'47	asc. node	-2819 Aug 14 j 18:20	18° B 13'00	
	-2824 Aug 17 j 05:15	0° Q			-2819 Sep 06 j 04:39	0° II	
	-2824 Sep 29 j 19:43	0° M		retrograde	-2819 Nov 14 j 11:37	21° II 00'08	
morning rise	-2824 Sep 30 j 11:29	0° M 27'43		opposition	-2819 Dec 24 j 04:11	11° II 31'26	4°03'17
	-2824 Nov 10 j 15:08	0° A		greatest brilliancy	-2819 Dec 24 j 08:22	11° II 27'17	-1.2m
	-2824 Dec 21 j 00:43	0° M		min. Earth dist.	-2819 Dec 25 j 13:48	10° II 58'01	0.67141 AU

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 9

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

direct	-2818 Feb 03 j 05:04	1° Π 35'15		conjunction	-2813 May 16 j 20:11	0° \mathcal{B} 57'06	0°22'40
	-2818 Apr 28 j 12:55	0° \mathfrak{S}		minimum elong	-2813 May 16 j 19:19	0° \mathcal{B} 55'40	0°22'41
	-2818 Jun 18 j 07:21	0° \mathcal{Q}		max. Earth dist.	-2813 May 28 j 04:37	8° \mathcal{B} 16'31	2.64979 AU
	-2818 Aug 01 j 21:39	0° \mathfrak{M}			-2813 Jul 01 j 03:48	0° Π	
desc. node	-2818 Aug 25 j 04:24	16° \mathfrak{M} 43'42		morning rise	-2813 Jul 03 j 07:06	1° Π 21'36	
	-2818 Sep 12 j 01:41	0° \mathfrak{A}			-2813 Aug 17 j 11:45	0° \mathfrak{S}	
	-2818 Oct 21 j 04:33	0° \mathfrak{M}			-2813 Oct 04 j 02:54	0° \mathcal{Q}	
evening set	-2818 Nov 28 j 04:16	29° \mathfrak{M} 51'20			-2813 Nov 21 j 11:54	0° \mathfrak{M}	
	-2818 Nov 28 j 08:40	0° \mathcal{X}			-2812 Jan 11 j 12:12	0° \mathfrak{A}	
	-2817 Jan 05 j 14:12	0° \mathfrak{Z}			-2812 Mar 18 j 04:22	0° \mathfrak{M}	
				retrograde	-2812 Apr 12 j 11:23	3° \mathfrak{M} 39'16	
conjunction	-2817 Feb 02 j 05:25	21° \mathfrak{Z} 15'49	-1°-6'-11	desc. node	-2812 Apr 16 j 03:07	3° \mathfrak{M} 34'19	
minimum elong	-2817 Feb 02 j 06:18	21° \mathfrak{Z} 17'31	1°06'16		-2812 May 07 j 12:26	30° \mathfrak{R} \mathfrak{A}	
	-2817 Feb 13 j 18:52	0° \approx		opposition	-2812 May 13 j 09:26	28° \mathfrak{A} 23'35	-1°-54'-11
max. Earth dist.	-2817 Mar 23 j 05:26	27° \approx 32'02	2.45134 AU	greatest brilliancy	-2812 May 13 j 20:42	28° \mathfrak{A} 15'41	-2.8m
	-2817 Mar 26 j 15:55	0° \mathfrak{H}		min. Earth dist.	-2812 May 18 j 10:45	26° \mathfrak{A} 58'45	0.39437 AU
morning rise	-2817 Apr 07 j 01:31	8° \mathfrak{H} 06'17		direct	-2812 Jun 14 j 17:57	22° \mathfrak{A} 30'18	
	-2817 May 08 j 17:00	0° \mathfrak{Y}			-2812 Jul 19 j 15:15	0° \mathfrak{M}	
	-2817 Jun 23 j 04:59	0° \mathcal{B}			-2812 Sep 12 j 19:00	0° \mathcal{X}	
asc. node	-2817 Jul 02 j 17:24	6° \mathcal{B} 03'37			-2812 Oct 27 j 18:16	0° \mathfrak{Z}	
	-2817 Aug 10 j 15:19	0° Π			-2812 Dec 10 j 10:54	0° \approx	
	-2817 Oct 03 j 09:23	0° \mathfrak{S}			-2811 Jan 23 j 17:56	0° \mathfrak{H}	
retrograde	-2817 Dec 21 j 19:51	25° \mathfrak{S} 30'29		asc. node	-2811 Feb 21 j 11:26	19° \mathfrak{H} 02'52	
opposition	-2816 Jan 29 j 00:06	16° \mathfrak{S} 51'14	4°55'37		-2811 Mar 10 j 05:18	0° \mathfrak{Y}	
greatest brilliancy	-2816 Jan 30 j 02:57	16° \mathfrak{S} 25'21	-1.4m		-2811 Apr 25 j 18:49	0° \mathcal{B}	
min. Earth dist.	-2816 Feb 03 j 06:09	14° \mathfrak{S} 49'55	0.62358 AU	evening set	-2811 May 07 j 06:33	7° \mathcal{B} 19'54	
direct	-2816 Mar 10 j 03:10	6° \mathfrak{S} 55'01			-2811 Jun 11 j 21:08	0° Π	
	-2816 May 20 j 11:17	0° \mathcal{Q}		max. Earth dist.	-2811 Jun 20 j 00:34	5° Π 11'17	2.67201 AU
	-2816 Jul 08 j 22:20	0° \mathfrak{M}					
desc. node	-2816 Jul 12 j 02:43	2° \mathfrak{M} 07'50		conjunction	-2811 Jun 23 j 12:08	7° Π 24'30	0°58'17
	-2816 Aug 20 j 14:14	0° \mathfrak{A}		minimum elong	-2811 Jun 23 j 10:57	7° Π 22'37	0°58'22
	-2816 Sep 29 j 07:50	0° \mathfrak{M}			-2811 Jul 28 j 18:42	0° \mathfrak{S}	
	-2816 Nov 06 j 20:54	0° \mathcal{X}		morning rise	-2811 Aug 07 j 15:00	6° \mathfrak{S} 21'03	
	-2816 Dec 15 j 10:57	0° \mathfrak{Z}			-2811 Sep 12 j 22:03	0° \mathcal{Q}	
	-2815 Jan 24 j 01:13	0° \approx			-2811 Oct 28 j 01:58	0° \mathfrak{M}	
evening set	-2815 Feb 02 j 10:10	6° \approx 56'00			-2811 Dec 11 j 09:08	0° \mathfrak{A}	
	-2815 Mar 06 j 07:59	0° \mathfrak{H}			-2810 Jan 24 j 04:52	0° \mathfrak{M}	
				desc. node	-2810 Mar 04 j 02:55	26° \mathfrak{M} 25'29	
conjunction	-2815 Apr 01 j 15:53	18° \mathfrak{H} 24'31	0°-27'-42		-2810 Mar 09 j 11:40	0° \mathcal{X}	
minimum elong	-2815 Apr 01 j 17:20	18° \mathfrak{H} 27'00	0°27'42		-2810 Apr 26 j 15:50	0° \mathfrak{Z}	
	-2815 Apr 18 j 15:23	0° \mathfrak{Y}		retrograde	-2810 Jun 28 j 17:54	21° \mathfrak{Z} 24'21	
max. Earth dist.	-2815 May 01 j 02:11	8° \mathfrak{Y} 22'15	2.57371 AU	min. Earth dist.	-2810 Jul 25 j 08:58	16° \mathfrak{Z} 49'39	0.40807 AU
asc. node	-2815 May 19 j 16:29	20° \mathfrak{Y} 41'25		greatest brilliancy	-2810 Jul 30 j 08:18	15° \mathfrak{Z} 18'58	-2.6m
morning rise	-2815 May 25 j 00:34	24° \mathfrak{Y} 11'14		opposition	-2810 Aug 01 j 04:51	14° \mathfrak{Z} 44'44	-6°-32'-27
	-2815 Jun 02 j 22:42	0° \mathcal{B}		direct	-2810 Aug 31 j 21:50	9° \mathfrak{Z} 08'09	
	-2815 Jul 20 j 00:13	0° Π			-2810 Nov 06 j 02:11	0° \approx	
	-2815 Sep 06 j 20:01	0° \mathfrak{S}			-2810 Dec 29 j 10:49	0° \mathfrak{H}	
	-2815 Oct 28 j 18:33	0° \mathcal{Q}		asc. node	-2809 Jan 09 j 10:38	6° \mathfrak{H} 35'24	
	-2814 Jan 01 j 22:34	0° \mathfrak{M}			-2809 Feb 16 j 20:17	0° \mathfrak{Y}	
retrograde	-2814 Feb 05 j 07:58	6° \mathfrak{M} 09'27			-2809 Apr 06 j 10:08	0° \mathcal{B}	
	-2814 Mar 09 j 09:16	30° \mathfrak{R} \mathcal{Q}			-2809 May 24 j 11:18	0° Π	
opposition	-2814 Mar 12 j 13:35	28° \mathcal{Q} 53'33	3°50'09	evening set	-2809 Jun 14 j 14:58	13° Π 23'01	
greatest brilliancy	-2814 Mar 14 j 05:35	28° \mathcal{Q} 18'08	-2.0m		-2809 Jul 10 j 13:00	0° \mathfrak{S}	
min. Earth dist.	-2814 Mar 20 j 21:23	25° \mathcal{Q} 57'20	0.51590 AU	max. Earth dist.	-2809 Jul 14 j 05:14	2° \mathfrak{S} 22'48	2.64016 AU
direct	-2814 Apr 20 j 11:02	19° \mathcal{Q} 59'56					
desc. node	-2814 May 30 j 03:10	29° \mathcal{Q} 10'23		conjunction	-2809 Jul 30 j 23:45	13° \mathfrak{S} 19'10	1°10'43
	-2814 Jun 01 j 02:02	0° \mathfrak{M}		minimum elong	-2809 Jul 30 j 23:49	13° \mathfrak{S} 19'17	1°10'49
	-2814 Jul 24 j 08:40	0° \mathfrak{A}			-2809 Aug 25 j 03:23	0° \mathcal{Q}	
	-2814 Sep 05 j 02:39	0° \mathfrak{M}		morning rise	-2809 Sep 14 j 21:23	14° \mathcal{Q} 02'07	
	-2814 Oct 15 j 05:15	0° \mathcal{X}			-2809 Oct 08 j 00:49	0° \mathfrak{M}	
	-2814 Nov 23 j 22:47	0° \mathfrak{Z}			-2809 Nov 19 j 07:09	0° \mathfrak{A}	
	-2813 Jan 03 j 12:57	0° \approx			-2809 Dec 30 j 06:02	0° \mathfrak{M}	
	-2813 Feb 14 j 16:55	0° \mathfrak{H}		desc. node	-2808 Jan 20 j 02:50	15° \mathfrak{M} 32'37	
evening set	-2813 Mar 26 j 22:35	27° \mathfrak{H} 28'38			-2808 Feb 08 j 10:11	0° \mathcal{X}	
	-2813 Mar 30 j 17:05	0° \mathfrak{Y}			-2808 Mar 19 j 15:56	0° \mathfrak{Z}	
asc. node	-2813 Apr 06 j 13:46	4° \mathfrak{Y} 34'17			-2808 Apr 30 j 12:24	0° \approx	
	-2813 May 15 j 08:55	0° \mathcal{B}			-2808 Jun 16 j 22:29	0° \mathfrak{H}	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 10

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

retrograde	-2808 Aug 19 j 13:49	21° ✕ 21'34				-2803 Aug 09 j 16:25	0° Ⓜ	
min. Earth dist.	-2808 Sep 19 j 17:05	14° ✕ 45'06	0.53127 AU	desc. node		-2803 Sep 10 j 22:01	23° Ⓜ 26'38	
opposition	-2808 Sep 26 j 23:31	11° ✕ 59'31	-2°-43'-14			-2803 Sep 19 j 16:12	0° ♎	
greatest brilliancy	-2808 Sep 26 j 00:19	12° ✕ 21'35	-1.9m			-2803 Oct 28 j 18:00	0° ♌	
direct	-2808 Nov 01 j 01:59	4° ✕ 13'43		evening set		-2803 Nov 01 j 07:26	2° ♌ 46'48	
asc. node	-2808 Nov 26 j 10:24	7° ✕ 54'32				-2803 Dec 05 j 21:45	0° ♏	
	-2807 Jan 19 j 00:49	0° ♑						
	-2807 Mar 14 j 18:28	0° ♐		conjunction		-2802 Jan 05 j 15:25	24° ♏ 10'35	-1°-3'-26
	-2807 May 04 j 03:24	0° ♐		minimum elong		-2802 Jan 05 j 13:27	24° ♏ 06'44	1°03'32
	-2807 Jun 21 j 01:31	0° ♏				-2802 Jan 13 j 02:28	0° ♐	
evening set	-2807 Jul 22 j 14:52	20° ♏ 35'05		max. Earth dist.		-2802 Feb 20 j 21:32	29° ♐ 45'05	2.40019 AU
	-2807 Aug 05 j 16:33	0° ♏				-2802 Feb 21 j 05:27	0° ♑	
max. Earth dist.	-2807 Aug 10 j 03:33	3° ♏ 00'55	2.55740 AU	morning rise		-2802 Mar 14 j 06:36	15° ♑ 39'30	
						-2802 Apr 03 j 00:47	0° ♑	
conjunction	-2807 Sep 09 j 02:19	23° ♏ 40'47	0°52'11			-2802 May 16 j 01:54	0° ♑	
minimum elong	-2807 Sep 09 j 03:54	23° ♏ 43'35	0°52'13			-2802 Jun 30 j 20:43	0° ♐	
	-2807 Sep 18 j 01:16	0° ♑		asc. node		-2802 Jul 19 j 08:57	11° ♐ 32'29	
	-2807 Oct 29 j 09:36	0° ♎				-2802 Aug 19 j 10:47	0° ♐	
morning rise	-2807 Oct 30 j 03:00	0° ♎ 32'15				-2802 Oct 17 j 19:25	0° ♏	
desc. node	-2807 Dec 07 j 01:35	29° ♎ 07'30		retrograde		-2802 Dec 06 j 15:38	11° ♏ 53'40	
	-2807 Dec 08 j 05:05	0° ♌		opposition		-2801 Jan 14 j 13:36	2° ♏ 51'57	4°44'50
	-2806 Jan 16 j 03:25	0° ♏		greatest brilliancy		-2801 Jan 15 j 07:01	2° ♏ 34'55	-1.3m
	-2806 Feb 23 j 23:39	0° ♐		min. Earth dist.		-2801 Jan 18 j 07:42	1° ♏ 23'49	0.65022 AU
	-2806 Apr 04 j 17:09	0° ♑				-2801 Jan 21 j 22:51	30° ♑	
	-2806 May 16 j 14:39	0° ♑		direct		-2801 Feb 24 j 21:00	22° ♐ 50'52	
	-2806 Jul 02 j 01:25	0° ♑				-2801 Apr 02 j 15:17	0° ♏	
	-2806 Sep 04 j 19:20	0° ♐				-2801 Jun 02 j 15:15	0° ♏	
retrograde	-2806 Sep 28 j 00:39	3° ♐ 17'15				-2801 Jul 19 j 06:15	0° ♑	
asc. node	-2806 Oct 14 j 09:56	1° ♐ 25'31		desc. node		-2801 Jul 29 j 21:06	7° ♑ 22'46	
	-2806 Oct 19 j 20:08	30° ♑				-2801 Aug 30 j 02:37	0° ♎	
min. Earth dist.	-2806 Nov 03 j 02:50	24° ♑ 52'47	0.63085 AU			-2801 Oct 08 j 11:51	0° ♌	
opposition	-2806 Nov 06 j 23:52	23° ♑ 19'41	0°56'17			-2801 Nov 15 j 19:36	0° ♏	
greatest brilliancy	-2806 Nov 06 j 18:43	23° ♑ 24'50	-1.5m			-2801 Dec 24 j 04:37	0° ♐	
direct	-2806 Dec 15 j 11:58	14° ♑ 14'42		evening set		-2800 Jan 09 j 15:59	12° ♐ 40'53	
	-2805 Feb 12 j 18:42	0° ♐				-2800 Feb 01 j 13:23	0° ♑	
	-2805 Apr 12 j 05:38	0° ♐						
	-2805 Jun 01 j 12:16	0° ♏		conjunction		-2800 Mar 11 j 16:10	28° ♑ 36'50	0°-46'-58
	-2805 Jul 17 j 20:20	0° ♏		minimum elong		-2800 Mar 11 j 18:29	28° ♑ 40'59	0°47'00
	-2805 Aug 30 j 04:21	0° ♑				-2800 Mar 13 j 14:45	0° ♑	
evening set	-2805 Sep 05 j 08:55	4° ♑ 26'12		max. Earth dist.		-2800 Apr 18 j 05:06	24° ♑ 51'58	2.53020 AU
max. Earth dist.	-2805 Sep 21 j 22:09	16° ♑ 28'42	2.43648 AU			-2800 Apr 25 j 17:55	0° ♑	
	-2805 Oct 10 j 02:59	0° ♎		morning rise		-2800 May 07 j 15:59	8° ♑ 01'57	
desc. node	-2805 Oct 24 j 23:08	11° ♎ 13'17		asc. node		-2800 Jun 05 j 07:13	26° ♑ 55'45	
						-2800 Jun 10 j 00:46	0° ♐	
conjunction	-2805 Oct 30 j 14:54	15° ♎ 32'24	0°-3'-57			-2800 Jul 27 j 10:05	0° ♐	
minimum elong	-2805 Oct 30 j 14:38	15° ♎ 31'52	0°03'59			-2800 Sep 15 j 10:08	0° ♏	
behind sun begin	-2805 Oct 29 j 14:19	14° ♎ 45'22				-2800 Nov 10 j 15:49	0° ♏	
behind sun end	-2805 Oct 31 j 14:57	16° ♎ 18'24		retrograde		-2799 Jan 16 j 12:58	19° ♏ 18'15	
	-2805 Nov 18 j 09:04	0° ♌		opposition		-2799 Feb 22 j 03:43	11° ♏ 24'23	4°36'22
	-2805 Dec 26 j 17:54	0° ♏		greatest brilliancy		-2799 Feb 23 j 18:32	10° ♏ 48'27	-1.7m
morning rise	-2804 Jan 01 j 11:17	4° ♏ 29'41		min. Earth dist.		-2799 Mar 01 j 12:43	8° ♏ 41'05	0.56415 AU
	-2804 Feb 03 j 02:06	0° ♐		direct		-2799 Apr 03 j 07:38	1° ♏ 54'49	
	-2804 Mar 13 j 06:52	0° ♑		desc. node		-2799 Jun 15 j 19:39	27° ♏ 30'26	
	-2804 Apr 23 j 05:21	0° ♑				-2799 Jun 20 j 02:43	0° ♑	
	-2804 Jun 05 j 20:23	0° ♑				-2799 Aug 05 j 02:43	0° ♎	
	-2804 Jul 23 j 20:42	0° ♐				-2799 Sep 15 j 01:52	0° ♌	
asc. node	-2804 Aug 31 j 09:55	20° ♐ 36'49				-2799 Oct 24 j 07:32	0° ♏	
	-2804 Sep 22 j 11:33	0° ♐				-2799 Dec 02 j 10:19	0° ♐	
retrograde	-2804 Oct 31 j 22:49	8° ♐ 10'41				-2798 Jan 11 j 11:56	0° ♑	
	-2804 Dec 07 j 02:57	30° ♑				-2798 Feb 22 j 05:05	0° ♑	
opposition	-2804 Dec 10 j 22:31	28° ♐ 28'47	3°23'37	evening set		-2798 Mar 08 j 02:28	9° ♑ 41'46	
greatest brilliancy	-2804 Dec 10 j 20:18	28° ♐ 31'00	-1.3m			-2798 Apr 06 j 20:31	0° ♑	
min. Earth dist.	-2804 Dec 10 j 20:10	28° ♐ 31'09	0.67258 AU	asc. node		-2798 Apr 23 j 06:00	10° ♑ 56'50	
direct	-2803 Jan 20 j 12:26	18° ♐ 41'25						
	-2803 Mar 10 j 04:58	0° ♐		conjunction		-2798 Apr 30 j 09:52	15° ♑ 40'59	0°04'12
	-2803 May 09 j 00:29	0° ♏		minimum elong		-2798 Apr 30 j 09:39	15° ♑ 40'38	0°04'13
	-2803 Jun 26 j 16:28	0° ♏		behind sun begin		-2798 Apr 29 j 13:04	15° ♑ 06'42	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 11

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

behind sun end	-2798 May 01 j 06:15	16° Υ 14'34		retrograde	-2793 Aug 02 j 07:40	1° H 08'06	
max. Earth dist.	-2798 May 18 j 11:14	27° Υ 30'32	2.62610 AU		-2793 Aug 14 j 18:26	30° $\text{R}\approx$	
	-2798 May 22 j 07:12	0° B		min. Earth dist.	-2793 Aug 31 j 07:16	25° \approx 23'49	0.48130 AU
morning rise	-2798 Jun 18 j 16:36	17° B 38'36		greatest brilliancy	-2793 Sep 06 j 17:05	23° \approx 05'56	-2.2m
	-2798 Jul 08 j 02:21	0° II		opposition	-2793 Sep 08 j 08:07	22° \approx 30'49	-4°-24'-55
	-2798 Aug 24 j 19:47	0° S		direct	-2793 Oct 11 j 16:40	15° \approx 31'01	
	-2798 Oct 12 j 13:29	0° Ω			-2793 Dec 05 j 03:45	0° H	
	-2798 Dec 02 j 17:28	0° M		asc. node	-2793 Dec 14 j 01:15	4° H 05'31	
	-2797 Feb 02 j 13:46	0° $\underline{\text{A}}$			-2792 Feb 01 j 00:50	0° Υ	
retrograde	-2797 Mar 15 j 01:33	8° $\underline{\text{A}}$ 25'18			-2792 Mar 23 j 08:24	0° B	
opposition	-2797 Apr 16 j 16:06	2° $\underline{\text{A}}$ 23'10	1°05'00		-2792 May 11 j 13:28	0° II	
greatest brilliancy	-2797 Apr 17 j 05:30	2° $\underline{\text{A}}$ 12'39	-2.5m		-2792 Jun 28 j 01:27	0° S	
min. Earth dist.	-2797 Apr 24 j 11:35	29° M 56'42	0.43584 AU	evening set	-2792 Jul 07 j 01:56	5° S 49'59	
	-2797 Apr 24 j 07:14	30° RM		max. Earth dist.	-2792 Jul 29 j 09:19	20° S 28'41	2.59543 AU
desc. node	-2797 May 03 j 19:07	27° M 24'07			-2792 Aug 12 j 15:09	0° Ω	
direct	-2797 May 22 j 01:08	25° M 08'36					
	-2797 Jun 18 j 14:06	0° $\underline{\text{A}}$		conjunction	-2792 Aug 23 j 07:12	7° Ω 13'38	1°03'39
	-2797 Aug 15 j 05:30	0° M		minimum elong	-2792 Aug 23 j 08:19	7° Ω 15'32	1°03'43
	-2797 Sep 28 j 01:30	0° J			-2792 Sep 25 j 03:37	0° M	
	-2797 Nov 08 j 19:04	0° S		morning rise	-2792 Oct 10 j 15:19	11° M 00'46	
	-2797 Dec 20 j 18:10	0° \approx			-2792 Nov 05 j 18:59	0° $\underline{\text{A}}$	
	-2796 Feb 01 j 22:41	0° H			-2792 Dec 15 j 22:58	0° M	
asc. node	-2796 Mar 10 j 04:03	25° H 01'48		desc. node	-2792 Dec 23 j 18:40	5° M 56'02	
	-2796 Mar 17 j 16:28	0° Υ			-2791 Jan 24 j 06:05	0° J	
evening set	-2796 Apr 21 j 13:07	22° Υ 44'35			-2791 Mar 04 j 11:12	0° S	
	-2796 May 02 j 19:13	0° B			-2791 Apr 13 j 15:58	0° \approx	
					-2791 May 26 j 13:09	0° H	
conjunction	-2796 Jun 08 j 20:50	23° B 43'43	0°46'51		-2791 Jul 15 j 14:08	0° Υ	
minimum elong	-2796 Jun 08 j 19:32	23° B 41'39	0°46'54	retrograde	-2791 Sep 13 j 14:41	18° Υ 26'18	
max. Earth dist.	-2796 Jun 10 j 20:31	24° B 59'47	2.66970 AU	min. Earth dist.	-2791 Oct 17 j 21:44	10° Υ 39'15	0.59809 AU
	-2796 Jun 18 j 16:53	0° II		opposition	-2791 Oct 23 j 04:42	8° Υ 33'32	0°-19'-49
morning rise	-2796 Jul 24 j 13:20	22° II 52'26		greatest brilliancy	-2791 Oct 23 j 02:28	8° Υ 35'45	-1.6m
	-2796 Aug 04 j 16:33	0° S		asc. node	-2791 Oct 31 j 01:14	5° Υ 33'12	
	-2796 Sep 20 j 06:18	0° Ω			-2791 Nov 25 j 14:52	30° RH	
	-2796 Nov 05 j 07:30	0° M		direct	-2791 Nov 29 j 13:01	29° H 54'02	
	-2796 Dec 21 j 04:02	0° $\underline{\text{A}}$			-2791 Dec 03 j 12:24	0° Υ	
	-2795 Feb 05 j 17:21	0° M			-2790 Feb 26 j 03:42	0° B	
desc. node	-2795 Mar 20 j 19:47	25° M 57'15			-2790 Apr 20 j 22:55	0° II	
	-2795 Mar 28 j 04:56	0° J			-2790 Jun 09 j 01:07	0° S	
retrograde	-2795 Jun 01 j 01:28	21° J 16'26			-2790 Jul 25 j 00:45	0° Ω	
min. Earth dist.	-2795 Jun 29 j 00:42	16° J 44'13	0.37965 AU	evening set	-2790 Aug 17 j 19:02	16° Ω 14'44	
greatest brilliancy	-2795 Jul 01 j 07:30	16° J 07'01	-2.8m	max. Earth dist.	-2790 Sep 01 j 17:11	26° Ω 42'52	2.48660 AU
opposition	-2795 Jul 02 j 04:20	15° J 52'52	-6°-14'-42		-2790 Sep 06 j 08:12	0° M	
direct	-2795 Jul 31 j 20:32	10° J 53'16					
	-2795 Oct 01 j 07:55	0° S		conjunction	-2790 Oct 08 j 16:19	23° M 30'05	0°22'10
	-2795 Nov 22 j 06:13	0° \approx		minimum elong	-2790 Oct 08 j 17:32	23° M 32'20	0°22'09
	-2794 Jan 08 j 23:17	0° H			-2790 Oct 17 j 09:58	0° $\underline{\text{A}}$	
asc. node	-2794 Jan 26 j 01:48	10° H 51'47		desc. node	-2790 Nov 10 j 17:39	18° $\underline{\text{A}}$ 23'19	
	-2794 Feb 25 j 06:21	0° Υ			-2790 Nov 25 j 20:19	0° M	
	-2794 Apr 13 j 20:12	0° B		morning rise	-2790 Dec 05 j 04:53	7° M 14'35	
evening set	-2794 May 30 j 21:13	29° B 39'44			-2789 Jan 03 j 09:11	0° J	
	-2794 May 31 j 10:01	0° II			-2789 Feb 10 j 20:32	0° S	
max. Earth dist.	-2794 Jul 04 j 16:50	21° II 50'47	2.65886 AU		-2789 Mar 22 j 03:52	0° \approx	
					-2789 May 02 j 06:52	0° H	
conjunction	-2794 Jul 16 j 06:30	29° II 17'50	1°09'06		-2789 Jun 15 j 11:52	0° Υ	
minimum elong	-2794 Jul 16 j 05:57	29° II 16'57	1°09'11		-2789 Aug 04 j 18:34	0° B	
	-2794 Jul 17 j 08:36	0° S		asc. node	-2789 Sep 18 j 00:07	19° B 38'33	
morning rise	-2794 Aug 30 j 11:14	28° S 54'38		retrograde	-2789 Oct 19 j 13:52	25° B 13'25	
	-2794 Sep 01 j 02:30	0° Ω		min. Earth dist.	-2789 Nov 27 j 02:45	16° B 00'00	0.66380 AU
	-2794 Oct 15 j 09:15	0° M		opposition	-2789 Nov 28 j 16:41	15° B 21'55	2°34'32
	-2794 Nov 27 j 06:17	0° $\underline{\text{A}}$		greatest brilliancy	-2789 Nov 28 j 10:30	15° B 28'07	-1.3m
	-2793 Jan 08 j 00:02	0° M		direct	-2788 Jan 07 j 14:37	5° B 47'41	
desc. node	-2793 Feb 05 j 19:11	20° M 59'34			-2788 Mar 24 j 22:47	0° II	
	-2793 Feb 18 j 03:13	0° J			-2788 May 18 j 01:16	0° S	
	-2793 Mar 31 j 16:33	0° S			-2788 Jul 04 j 12:30	0° Ω	
	-2793 May 15 j 06:15	0° \approx			-2788 Aug 17 j 04:13	0° M	
	-2793 Jul 20 j 16:09	0° H		desc. node	-2788 Sep 27 j 15:29	0° $\underline{\text{A}}$ 23'51	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 12

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2788 Sep 27 j 02:48	0°♁		morning rise	-2783 Jun 03 j 07:28	3°♁16'24	
evening set	-2788 Oct 07 j 15:05	7°♁57'19			-2783 Jul 15 j 04:11	0°♁	
	-2788 Nov 05 j 05:37	0°♁			-2783 Sep 01 j 11:57	0°♁	
max. Earth dist.	-2788 Nov 29 j 05:14	18°♁47'38	2.37576 AU		-2783 Oct 21 j 22:23	0°♁	
					-2783 Dec 17 j 19:33	0°♁	
conjunction	-2788 Dec 08 j 10:32	26°♁03'25	0°-46'-12	retrograde	-2782 Feb 17 j 22:55	17°♁14'38	
minimum elong	-2788 Dec 08 j 07:26	25°♁57'20	0°46'15	opposition	-2782 Mar 24 j 06:38	10°♁23'08	3°05'06
	-2788 Dec 13 j 10:37	0°♁		greatest brilliancy	-2782 Mar 25 j 17:54	9°♁52'55	-2.1m
	-2787 Jan 20 j 15:45	0°♁		min. Earth dist.	-2782 Apr 01 j 18:09	7°♁29'31	0.48731 AU
morning rise	-2787 Feb 15 j 00:55	19°♁35'30		direct	-2782 May 01 j 03:29	1°♁58'15	
	-2787 Feb 28 j 18:05	0°♁		desc. node	-2782 May 20 j 11:51	4°♁25'09	
	-2787 Apr 10 j 12:39	0°♁			-2782 Jul 15 j 07:27	0°♁	
	-2787 May 23 j 15:43	0°♁			-2782 Aug 29 j 04:55	0°♁	
	-2787 Jul 08 j 22:15	0°♁			-2782 Oct 09 j 03:47	0°♁	
asc. node	-2787 Aug 04 j 23:51	16°♁18'25			-2782 Nov 18 j 09:31	0°♁	
	-2787 Aug 29 j 11:56	0°♁			-2782 Dec 29 j 08:13	0°♁	
retrograde	-2787 Nov 22 j 09:49	28°♁50'32			-2781 Feb 09 j 18:38	0°♁	
opposition	-2787 Dec 31 j 21:00	19°♁30'28	4°21'41		-2781 Mar 25 j 23:23	0°♁	
greatest brilliancy	-2786 Jan 01 j 05:36	19°♁21'58	-1.3m	asc. node	-2781 Mar 27 j 19:46	1°♁13'51	
min. Earth dist.	-2786 Jan 03 j 03:02	18°♁37'00	0.66665 AU	evening set	-2781 Apr 05 j 22:28	7°♁16'04	
direct	-2786 Feb 11 j 01:46	9°♁30'58			-2781 May 10 j 18:00	0°♁	
	-2786 Apr 20 j 12:24	0°♁					
	-2786 Jun 12 j 12:36	0°♁		conjunction	-2781 May 25 j 18:30	9°♁40'55	0°32'20
	-2786 Jul 27 j 17:16	0°♁		minimum elong	-2781 May 25 j 17:23	9°♁39'07	0°32'21
desc. node	-2786 Aug 15 j 13:38	13°♁24'11		max. Earth dist.	-2781 Jun 02 j 17:14	14°♁46'48	2.65918 AU
	-2786 Sep 07 j 02:40	0°♁			-2781 Jun 26 j 13:03	0°♁	
	-2786 Oct 16 j 07:31	0°♁		morning rise	-2781 Jul 11 j 11:07	9°♁29'47	
greatest brilliancy	-2786 Nov 22 j 21:42	29°♁30'36	1.2m		-2781 Aug 12 j 17:17	0°♁	
	-2786 Nov 23 j 12:37	0°♁			-2781 Sep 28 j 21:36	0°♁	
evening set	-2786 Dec 13 j 17:25	15°♁53'31			-2781 Nov 15 j 05:42	0°♁	
	-2786 Dec 31 j 18:57	0°♁			-2780 Jan 02 j 16:53	0°♁	
	-2785 Feb 09 j 00:17	0°♁			-2780 Feb 24 j 20:00	0°♁	
				desc. node	-2780 Apr 06 j 11:37	16°♁57'00	
conjunction	-2785 Feb 16 j 21:06	5°♁52'49	-1°-1'-45	retrograde	-2780 Apr 30 j 13:48	20°♁21'33	
minimum elong	-2785 Feb 16 j 23:05	5°♁56'31	1°01'49	opposition	-2780 May 30 j 22:39	15°♁19'30	-3°-48'-5
	-2785 Mar 21 j 21:56	0°♁		greatest brilliancy	-2780 May 31 j 07:19	15°♁13'40	-2.8m
max. Earth dist.	-2785 Apr 03 j 07:29	8°♁48'27	2.48054 AU	min. Earth dist.	-2780 Jun 02 j 07:35	14°♁41'11	0.38055 AU
morning rise	-2785 Apr 19 j 05:07	19°♁54'32		direct	-2780 Jun 30 j 21:46	10°♁01'41	
	-2785 May 03 j 22:31	0°♁			-2780 Aug 31 j 07:35	0°♁	
	-2785 Jun 18 j 06:54	0°♁			-2780 Oct 19 j 16:49	0°♁	
asc. node	-2785 Jun 22 j 23:53	3°♁01'30			-2780 Dec 04 j 01:22	0°♁	
	-2785 Aug 05 j 04:52	0°♁			-2779 Jan 18 j 05:20	0°♁	
	-2785 Sep 26 j 02:46	0°♁		asc. node	-2779 Feb 11 j 18:00	16°♁04'58	
	-2785 Dec 03 j 10:49	0°♁			-2779 Mar 05 j 04:52	0°♁	
retrograde	-2785 Dec 31 j 01:04	4°♁06'45			-2779 Apr 21 j 01:26	0°♁	
	-2784 Jan 25 j 14:16	30°♁		evening set	-2779 May 15 j 23:18	15°♁49'26	
opposition	-2784 Feb 06 j 17:43	25°♁41'56	4°54'12		-2779 Jun 07 j 07:02	0°♁	
greatest brilliancy	-2784 Feb 08 j 01:32	25°♁11'38	-1.5m	max. Earth dist.	-2779 Jun 25 j 08:57	11°♁30'53	2.66972 AU
min. Earth dist.	-2784 Feb 12 j 19:14	23°♁23'34	0.60501 AU				
direct	-2784 Mar 18 j 15:31	15°♁51'46		conjunction	-2779 Jul 01 j 18:39	15°♁36'23	1°03'20
	-2784 May 10 j 10:28	0°♁		minimum elong	-2779 Jul 01 j 17:39	15°♁34'47	1°03'24
desc. node	-2784 Jul 02 j 12:43	0°♁03'37			-2779 Jul 24 j 04:44	0°♁	
	-2784 Jul 02 j 10:29	0°♁		morning rise	-2779 Aug 15 j 18:49	14°♁38'34	
	-2784 Aug 14 j 22:58	0°♁			-2779 Sep 08 j 04:30	0°♁	
	-2784 Sep 24 j 00:44	0°♁			-2779 Oct 23 j 00:09	0°♁	
	-2784 Nov 01 j 18:17	0°♁			-2779 Dec 05 j 17:19	0°♁	
	-2784 Dec 10 j 11:37	0°♁			-2778 Jan 17 j 14:51	0°♁	
	-2783 Jan 19 j 04:32	0°♁		desc. node	-2778 Feb 22 j 13:10	25°♁14'45	
evening set	-2783 Feb 15 j 06:43	19°♁47'45			-2778 Mar 01 j 08:42	0°♁	
	-2783 Mar 01 j 13:45	0°♁			-2778 Apr 14 j 17:35	0°♁	
					-2778 Jun 08 j 16:05	0°♁	
conjunction	-2783 Apr 12 j 14:24	29°♁05'04	0°-15'-55	retrograde	-2778 Jul 12 j 07:13	7°♁15'29	
minimum elong	-2783 Apr 12 j 15:12	29°♁06'25	0°15'56	min. Earth dist.	-2778 Aug 08 j 11:22	2°♁20'38	0.43179 AU
	-2783 Apr 13 j 22:53	0°♁		greatest brilliancy	-2778 Aug 14 j 05:50	0°♁27'34	-2.5m
max. Earth dist.	-2783 May 07 j 17:45	15°♁53'44	2.59462 AU		-2778 Aug 15 j 15:15	30°♁	
asc. node	-2783 May 09 j 21:53	17°♁19'51		opposition	-2778 Aug 16 j 05:34	29°♁48'14	-5°-58'-20
	-2783 May 29 j 06:21	0°♁		direct	-2778 Sep 16 j 18:51	23°♁41'54	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 13

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2778 Oct 20 j 01:42	0°≈		conjunction	-2773 Nov 13 j 04:44	29°♄38'50	0°-19'-54
	-2778 Dec 21 j 15:40	0°✠		minimum elong	-2773 Nov 13 j 03:15	29°♄35'57	0°19'55
asc. node	-2778 Dec 30 j 16:14	5°✠06'28			-2773 Nov 13 j 15:38	0°♍	
	-2777 Feb 10 j 23:21	0°♂			-2773 Dec 21 j 22:44	0°♂	
	-2777 Apr 01 j 07:59	0°♂		morning rise	-2772 Jan 17 j 19:30	21°♂05'55	
	-2777 May 19 j 17:44	0°♂			-2772 Jan 29 j 05:17	0°♂	
evening set	-2777 Jun 23 j 02:25	21°♂44'25			-2772 Mar 08 j 08:18	0°≈	
	-2777 Jul 05 j 22:52	0°♂			-2772 Apr 18 j 04:00	0°✠	
max. Earth dist.	-2777 Jul 20 j 00:08	9°♂07'21	2.62645 AU		-2772 May 31 j 12:30	0°♂	
					-2772 Jul 17 j 15:47	0°♂	
conjunction	-2777 Aug 08 j 14:53	22°♂02'15	1°09'34	asc. node	-2772 Aug 21 j 15:56	19°♂51'24	
minimum elong	-2777 Aug 08 j 15:20	22°♂03'00	1°09'39		-2772 Sep 11 j 04:02	0°♂	
	-2777 Aug 20 j 13:09	0°♂		retrograde	-2772 Nov 08 j 17:06	16°♂00'20	
morning rise	-2777 Sep 24 j 04:03	23°♂37'34		opposition	-2772 Dec 18 j 13:18	6°♂25'28	3°47'50
	-2777 Oct 03 j 07:32	0°♂		greatest brilliancy	-2772 Dec 18 j 14:26	6°♂24'20	-1.2m
	-2777 Nov 14 j 08:33	0°♄		min. Earth dist.	-2772 Dec 19 j 07:14	6°♂07'35	0.67318 AU
	-2777 Dec 25 j 00:16	0°♍			-2771 Jan 05 j 05:12	30°♂	
desc. node	-2776 Jan 10 j 12:27	12°♍23'24		direct	-2771 Jan 28 j 09:40	26°♂32'37	
	-2776 Feb 02 j 19:48	0°♂			-2771 Feb 22 j 12:00	0°♂	
	-2776 Mar 13 j 14:31	0°♂			-2771 May 02 j 10:40	0°♂	
	-2776 Apr 23 j 15:02	0°≈			-2771 Jun 21 j 07:20	0°♂	
	-2776 Jun 07 j 12:52	0°✠			-2771 Aug 04 j 16:38	0°♂	
	-2776 Aug 11 j 13:26	0°♂		desc. node	-2771 Sep 01 j 07:11	19°♂55'34	
retrograde	-2776 Aug 29 j 03:05	2°♂02'57			-2771 Sep 14 j 20:05	0°♄	
	-2776 Sep 14 j 23:15	30°♂			-2771 Oct 23 j 23:07	0°♍	
min. Earth dist.	-2776 Sep 30 j 09:47	24°♂59'46	0.55675 AU	evening set	-2771 Nov 16 j 05:50	18°♍15'27	
greatest brilliancy	-2776 Oct 06 j 10:23	22°♂39'46	-1.8m		-2771 Dec 01 j 03:09	0°♂	
opposition	-2776 Oct 07 j 00:47	22°♂25'48	-1°-47'-42		-2770 Jan 08 j 07:55	0°♂	
direct	-2776 Nov 12 j 00:10	14°♂18'39					
asc. node	-2776 Nov 16 j 15:47	14°♂26'55		conjunction	-2770 Jan 21 j 09:12	10°♂07'17	-1°-6'-46
	-2775 Jan 09 j 05:53	0°♂		minimum elong	-2770 Jan 21 j 08:54	10°♂06'41	1°06'52
	-2775 Mar 08 j 15:36	0°♂			-2770 Feb 16 j 10:50	0°≈	
	-2775 Apr 29 j 00:08	0°♂		max. Earth dist.	-2770 Mar 12 j 12:26	17°≈52'38	2.42768 AU
	-2775 Jun 16 j 07:26	0°♂		morning rise	-2770 Mar 28 j 03:20	29°≈12'41	
evening set	-2775 Jul 31 j 20:06	29°♂50'36			-2770 Mar 29 j 05:42	0°✠	
	-2775 Aug 01 j 01:41	0°♂			-2770 May 11 j 05:11	0°♂	
max. Earth dist.	-2775 Aug 17 j 14:59	11°♂16'10	2.53355 AU		-2770 Jun 25 j 18:00	0°♂	
	-2775 Sep 13 j 10:09	0°♂		asc. node	-2770 Jul 09 j 14:50	8°♂46'13	
					-2770 Aug 13 j 12:36	0°♂	
conjunction	-2775 Sep 19 j 07:00	4°♂11'00	0°42'55		-2770 Oct 07 j 21:54	0°♂	
minimum elong	-2775 Sep 19 j 08:40	4°♂13'59	0°42'56	retrograde	-2770 Dec 15 j 05:02	20°♂03'47	
	-2775 Oct 24 j 16:20	0°♄		opposition	-2769 Jan 22 j 17:54	11°♂14'02	4°52'30
morning rise	-2775 Nov 11 j 06:50	13°♄11'34		greatest brilliancy	-2769 Jan 23 j 16:38	10°♂51'57	-1.4m
desc. node	-2775 Nov 27 j 10:26	25°♄27'50		min. Earth dist.	-2769 Jan 27 j 08:25	9°♂26'48	0.63665 AU
	-2775 Dec 03 j 08:34	0°♍		direct	-2769 Mar 04 j 23:48	1°♂14'35	
	-2774 Jan 11 j 03:16	0°♂			-2769 May 26 j 07:41	0°♂	
	-2774 Feb 18 j 19:51	0°♂			-2769 Jul 13 j 10:52	0°♂	
	-2774 Mar 30 j 08:29	0°≈		desc. node	-2769 Jul 20 j 05:11	4°♂36'18	
	-2774 May 10 j 20:32	0°✠			-2769 Aug 24 j 18:53	0°♄	
	-2774 Jun 25 j 03:38	0°♂			-2769 Oct 03 j 09:14	0°♍	
	-2774 Aug 19 j 15:58	0°♂			-2769 Nov 10 j 19:52	0°♂	
asc. node	-2774 Oct 04 j 16:20	11°♂45'05			-2769 Dec 19 j 07:15	0°♂	
retrograde	-2774 Oct 06 j 00:39	11°♂45'48		evening set	-2768 Jan 23 j 23:29	27°♂10'39	
min. Earth dist.	-2774 Nov 12 j 00:31	3°♂02'43	0.64506 AU		-2768 Jan 27 j 18:04	0°≈	
opposition	-2774 Nov 15 j 01:54	1°♂49'04	1°35'28		-2768 Mar 08 j 21:06	0°✠	
greatest brilliancy	-2774 Nov 14 j 19:03	1°♂55'57	-1.4m				
	-2774 Nov 19 j 15:45	30°♂		conjunction	-2768 Mar 23 j 21:13	10°♂35'37	0°-36'-12
direct	-2774 Dec 24 j 02:55	22°♂32'26		minimum elong	-2768 Mar 23 j 23:06	10°♂38'56	0°36'13
	-2773 Jan 31 j 12:21	0°♂			-2768 Apr 21 j 01:15	0°♂	
	-2773 Apr 05 j 22:28	0°♂		max. Earth dist.	-2768 Apr 25 j 19:06	3°♂12'37	2.55510 AU
	-2773 May 27 j 07:28	0°♂		morning rise	-2768 May 17 j 18:24	17°♂52'28	
	-2773 Jul 13 j 00:44	0°♂		asc. node	-2768 May 26 j 14:12	23°♂40'42	
	-2773 Aug 25 j 11:45	0°♂			-2768 Jun 05 j 06:55	0°♂	
evening set	-2773 Sep 16 j 17:20	16°♂05'27			-2768 Jul 22 j 10:20	0°♂	
	-2773 Oct 05 j 10:41	0°♄			-2768 Sep 09 j 15:54	0°♂	
max. Earth dist.	-2773 Oct 07 j 19:18	1°♄46'25	2.41000 AU		-2768 Nov 01 j 23:47	0°♂	
desc. node	-2773 Oct 15 j 08:44	7°♄29'20		retrograde	-2767 Jan 27 j 10:54	29°♂04'30	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 14

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

opposition	-2767 Mar 04 j 07:49	21°♌30'40	4°13'39		-2762 Feb 19 j 20:13	0°♑	
greatest brilliancy	-2767 Mar 06 j 00:17	20°♌54'00	-1.8m		-2762 Apr 08 j 22:15	0°♎	
min. Earth dist.	-2767 Mar 12 j 06:42	18°♌38'16	0.53818 AU		-2762 May 26 j 18:07	0°♍	
direct	-2767 Apr 12 j 20:33	12°♌18'23		evening set	-2762 Jun 08 j 08:39	7°♍58'25	
desc. node	-2767 Jun 06 j 05:05	28°♌01'33		max. Earth dist.	-2762 Jul 10 j 06:28	28°♍22'24	2.64961 AU
	-2767 Jun 10 j 02:19	0°♎			-2762 Jul 12 j 18:56	0°♎	
	-2767 Jul 29 j 04:48	0°♎					
	-2767 Sep 09 j 01:30	0°♍		conjunction	-2762 Jul 24 j 16:01	7°♎42'19	1°10'34
	-2767 Oct 18 j 17:29	0°♎		minimum elong	-2762 Jul 24 j 15:49	7°♎41'59	1°10'38
	-2767 Nov 27 j 03:20	0°♎			-2762 Aug 27 j 11:33	0°♌	
	-2766 Jan 06 j 10:35	0°♎		morning rise	-2762 Sep 08 j 04:05	7°♌50'43	
	-2766 Feb 17 j 08:18	0°♎			-2762 Oct 10 j 13:49	0°♎	
evening set	-2766 Mar 19 j 01:41	20°♎30'05			-2762 Nov 22 j 03:01	0°♎	
	-2766 Apr 02 j 03:21	0°♑			-2761 Jan 02 j 10:10	0°♍	
asc. node	-2766 Apr 13 j 11:30	7°♑34'17		desc. node	-2761 Jan 27 j 04:57	18°♍18'04	
					-2761 Feb 11 j 23:24	0°♎	
conjunction	-2766 May 09 j 22:53	24°♑59'20	0°15'08		-2761 Mar 24 j 16:27	0°♎	
minimum elong	-2766 May 09 j 22:15	24°♑58'19	0°15'10		-2761 May 06 j 08:32	0°♎	
behind sun begin	-2766 May 09 j 16:39	24°♑49'11			-2761 Jun 25 j 23:11	0°♎	
behind sun end	-2766 May 10 j 03:52	25°♑07'26		retrograde	-2761 Aug 13 j 00:48	13°♎25'50	
	-2766 May 17 j 15:51	0°♎		min. Earth dist.	-2761 Sep 12 j 04:12	7°♎12'28	0.50929 AU
max. Earth dist.	-2766 May 24 j 06:15	4°♎16'26	2.64033 AU	opposition	-2761 Sep 19 j 20:57	4°♎20'57	-3°-26'-21
morning rise	-2766 Jun 27 j 03:21	26°♎00'11		greatest brilliancy	-2761 Sep 18 j 14:47	4°♎49'03	-2.0m
	-2766 Jul 03 j 10:04	0°♍			-2761 Oct 02 j 18:50	30°♎	
	-2766 Aug 19 j 21:34	0°♎		direct	-2761 Oct 24 j 05:53	26°♎54'27	
	-2766 Oct 06 j 22:54	0°♌			-2761 Nov 16 j 04:53	0°♎	
	-2766 Nov 25 j 08:01	0°♎		asc. node	-2761 Dec 04 j 07:43	5°♎45'27	
	-2765 Jan 18 j 07:26	0°♎			-2760 Jan 24 j 17:30	0°♑	
retrograde	-2765 Mar 31 j 00:48	22°♎29'02			-2760 Mar 17 j 18:39	0°♎	
desc. node	-2765 Apr 24 j 05:22	19°♎01'14			-2760 May 06 j 14:58	0°♍	
opposition	-2765 May 01 j 16:32	16°♎54'15	0°-30'-12		-2760 Jun 23 j 09:22	0°♎	
greatest brilliancy	-2765 May 01 j 21:03	16°♎50'55	-2.6m	evening set	-2760 Jul 15 j 21:36	14°♎36'54	
min. Earth dist.	-2765 May 08 j 08:03	14°♎57'13	0.41094 AU	max. Earth dist.	-2760 Aug 05 j 01:41	28°♎00'26	2.57533 AU
direct	-2765 Jun 04 j 09:46	10°♎25'02			-2760 Aug 08 j 00:50	0°♌	
	-2765 Aug 03 j 06:28	0°♍					
	-2765 Sep 20 j 01:16	0°♎		conjunction	-2760 Sep 01 j 17:25	16°♌51'27	0°57'44
	-2765 Nov 02 j 05:23	0°♎		minimum elong	-2760 Sep 01 j 18:49	16°♌53'54	0°57'47
	-2765 Dec 14 j 23:58	0°♎			-2760 Sep 20 j 12:19	0°♎	
	-2764 Jan 27 j 16:48	0°♎		morning rise	-2760 Oct 21 j 09:45	22°♎12'14	
asc. node	-2764 Feb 29 j 08:43	21°♎49'33			-2760 Nov 01 j 00:39	0°♎	
	-2764 Mar 12 j 18:52	0°♑			-2760 Dec 11 j 00:29	0°♍	
	-2764 Apr 28 j 02:41	0°♎		desc. node	-2760 Dec 14 j 03:58	2°♍23'43	
evening set	-2764 Apr 30 j 15:59	1°♎38'13			-2759 Jan 19 j 02:39	0°♎	
	-2764 Jun 14 j 02:33	0°♍			-2759 Feb 27 j 02:14	0°♎	
max. Earth dist.	-2764 Jun 16 j 04:55	1°♍20'14	2.67211 AU		-2759 Apr 07 j 23:08	0°♎	
					-2759 May 20 j 03:15	0°♎	
conjunction	-2764 Jun 17 j 07:41	2°♍02'52	0°53'55		-2759 Jul 06 j 14:07	0°♑	
minimum elong	-2764 Jun 17 j 06:26	2°♍00'53	0°53'58	retrograde	-2759 Sep 22 j 00:29	27°♑31'40	
	-2764 Jul 31 j 01:11	0°♎		asc. node	-2759 Oct 21 j 07:04	21°♑41'53	
morning rise	-2764 Aug 01 j 15:01	1°♎00'46		min. Earth dist.	-2759 Oct 27 j 07:45	19°♑22'58	0.61726 AU
	-2764 Sep 15 j 09:10	0°♌		opposition	-2759 Oct 31 j 19:44	17°♑35'15	0°25'49
	-2764 Oct 30 j 22:13	0°♎		greatest brilliancy	-2759 Oct 31 j 16:55	17°♑38'03	-1.5m
	-2764 Dec 14 j 20:22	0°♎		direct	-2759 Dec 08 j 19:29	8°♑40'50	
	-2763 Jan 28 j 15:55	0°♍			-2758 Feb 18 j 02:10	0°♎	
desc. node	-2763 Mar 11 j 05:07	27°♍06'48			-2758 Apr 15 j 06:49	0°♍	
	-2763 Mar 15 j 19:17	0°♎			-2758 Jun 04 j 01:41	0°♎	
	-2763 May 09 j 16:45	0°♎			-2758 Jul 20 j 07:14	0°♌	
retrograde	-2763 Jun 17 j 07:14	8°♎59'15		evening set	-2758 Aug 28 j 03:42	26°♌47'16	
min. Earth dist.	-2763 Jul 14 j 01:43	4°♎32'26	0.39238 AU		-2758 Sep 01 j 16:14	0°♎	
greatest brilliancy	-2763 Jul 18 j 01:05	3°♎24'02	-2.7m	max. Earth dist.	-2758 Sep 12 j 09:47	7°♎41'55	2.45894 AU
opposition	-2763 Jul 19 j 13:35	2°♎57'37	-6°-40'-16		-2758 Oct 12 j 17:17	0°♎	
	-2763 Jul 30 j 15:17	30°♎					
direct	-2763 Aug 18 j 16:08	27°♎41'58		conjunction	-2758 Oct 20 j 18:53	6°♎03'42	0°07'47
	-2763 Sep 06 j 19:42	0°♎		minimum elong	-2758 Oct 20 j 19:23	6°♎04'39	0°07'46
	-2763 Nov 13 j 06:30	0°♎		behind sun begin	-2758 Oct 19 j 21:58	5°♎24'17	
	-2762 Jan 02 j 12:12	0°♎		behind sun end	-2758 Oct 21 j 16:48	6°♎45'03	
asc. node	-2762 Jan 16 j 07:56	8°♎32'05		desc. node	-2758 Nov 01 j 01:31	14°♎37'03	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 15

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2758 Nov 21 j 01:59	0°♄		retrograde	-2752 Jan 09 j 18:49	13°♏03'42	
morning rise	-2758 Dec 20 j 05:24	22°♄42'25		opposition	-2752 Feb 15 j 21:44	4°♏55'15	4°46'15
	-2758 Dec 29 j 12:45	0°♂		greatest brilliancy	-2752 Feb 17 j 09:51	4°♏21'20	-1.6m
greatest brilliancy	-2757 Jan 11 j 20:33	10°♂26'32	1.2m	min. Earth dist.	-2752 Feb 22 j 17:08	2°♏22'05	0.58356 AU
	-2757 Feb 05 j 22:02	0°♂			-2752 Feb 29 j 10:11	30°♏	
	-2757 Mar 17 j 03:05	0°♁		direct	-2752 Mar 27 j 10:59	25°♁14'40	
	-2757 Apr 27 j 01:46	0°♂			-2752 Apr 24 j 22:30	0°♏	
	-2757 Jun 09 j 20:02	0°♂		desc. node	-2752 Jun 22 j 22:02	28°♏36'47	
	-2757 Jul 28 j 11:50	0°♂			-2752 Jun 25 j 04:21	0°♏	
asc. node	-2757 Sep 08 j 06:55	21°♂06'30			-2752 Aug 08 j 23:17	0°♏	
	-2757 Oct 03 j 23:52	0°♏			-2752 Sep 18 j 12:49	0°♄	
retrograde	-2757 Oct 27 j 06:55	3°♏08'39			-2752 Oct 27 j 12:35	0°♂	
	-2757 Nov 18 j 00:10	30°♏			-2752 Dec 05 j 10:15	0°♂	
opposition	-2757 Dec 06 j 08:11	23°♂22'06	3°04'20		-2751 Jan 14 j 06:49	0°♁	
greatest brilliancy	-2757 Dec 06 j 03:51	23°♂26'27	-1.3m		-2751 Feb 24 j 18:52	0°♂	
min. Earth dist.	-2757 Dec 05 j 14:09	23°♂40'11	0.66988 AU	evening set	-2751 Feb 27 j 09:11	1°♂49'54	
direct	-2756 Jan 15 j 15:06	13°♂40'01			-2751 Apr 09 j 06:08	0°♂	
	-2756 Mar 16 j 06:17	0°♏					
	-2756 May 12 j 06:17	0°♁		conjunction	-2751 Apr 22 j 23:21	9°♂12'03	0°-4'-13
	-2756 Jun 29 j 10:40	0°♏		minimum elong	-2751 Apr 22 j 23:33	9°♂12'23	0°04'12
	-2756 Aug 12 j 08:16	0°♏		behind sun begin	-2751 Apr 22 j 02:28	8°♂37'16	
desc. node	-2756 Sep 18 j 00:17	26°♏44'39		behind sun end	-2751 Apr 23 j 20:37	9°♂47'28	
	-2756 Sep 22 j 08:31	0°♏		asc. node	-2751 Apr 30 j 03:22	13°♂57'46	
evening set	-2756 Oct 21 j 06:12	22°♏04'03		max. Earth dist.	-2751 May 14 j 02:26	23°♂09'26	2.61299 AU
	-2756 Oct 31 j 11:20	0°♄			-2751 May 24 j 14:03	0°♂	
	-2756 Dec 08 j 15:36	0°♂		morning rise	-2751 Jun 12 j 06:08	12°♂03'46	
					-2751 Jul 10 j 09:27	0°♏	
conjunction	-2756 Dec 24 j 06:40	12°♂19'05	0°-57'-36		-2751 Aug 27 j 07:59	0°♁	
minimum elong	-2756 Dec 24 j 03:49	12°♂13'31	0°57'40		-2751 Oct 15 j 16:25	0°♏	
	-2755 Jan 15 j 20:04	0°♂			-2751 Dec 07 j 16:02	0°♏	
max. Earth dist.	-2755 Jan 27 j 18:43	9°♂16'17	2.38191 AU	retrograde	-2750 Mar 03 j 14:14	29°♏12'59	
	-2755 Feb 23 j 21:57	0°♁		opposition	-2750 Apr 05 j 23:58	22°♏48'03	2°03'49
morning rise	-2755 Mar 02 j 19:52	5°♁11'37		greatest brilliancy	-2750 Apr 07 j 01:05	22°♏27'25	-2.3m
	-2755 Apr 05 j 15:34	0°♂		min. Earth dist.	-2750 Apr 14 j 07:26	20°♏05'19	0.45841 AU
	-2755 May 18 j 15:54	0°♂		desc. node	-2750 May 10 j 21:09	15°♏00'33	
	-2755 Jul 03 j 13:10	0°♂		direct	-2750 May 12 j 13:34	14°♏59'21	
asc. node	-2755 Jul 26 j 06:32	14°♂00'33			-2750 Jul 03 j 01:26	0°♏	
	-2755 Aug 22 j 17:42	0°♏			-2750 Aug 21 j 07:27	0°♄	
	-2755 Oct 25 j 12:21	0°♁			-2750 Oct 02 j 14:12	0°♂	
retrograde	-2755 Nov 30 j 11:51	6°♁44'00			-2750 Nov 12 j 12:47	0°♂	
	-2754 Jan 02 j 08:47	30°♏			-2750 Dec 23 j 23:02	0°♁	
opposition	-2754 Jan 08 j 16:21	27°♏33'46	4°36'17		-2749 Feb 04 j 17:37	0°♂	
greatest brilliancy	-2754 Jan 09 j 05:47	27°♏20'32	-1.3m	asc. node	-2749 Mar 18 j 01:38	27°♂56'15	
min. Earth dist.	-2754 Jan 11 j 18:35	26°♏20'43	0.65888 AU		-2749 Mar 21 j 04:13	0°♂	
direct	-2754 Feb 18 j 23:14	17°♏32'36		evening set	-2749 Apr 15 j 13:32	16°♂41'14	
	-2754 Apr 10 j 14:13	0°♁			-2749 May 06 j 02:12	0°♂	
	-2754 Jun 06 j 08:39	0°♏					
	-2754 Jul 22 j 09:15	0°♏		conjunction	-2749 Jun 03 j 12:02	18°♂14'25	0°41'07
desc. node	-2754 Aug 05 j 23:44	10°♏14'55		minimum elong	-2749 Jun 03 j 10:47	18°♂12'24	0°41'10
	-2754 Sep 02 j 01:41	0°♏		max. Earth dist.	-2749 Jun 08 j 04:01	21°♂13'18	2.66599 AU
	-2754 Oct 11 j 09:32	0°♄			-2749 Jun 21 j 22:10	0°♏	
	-2754 Nov 18 j 15:55	0°♂		morning rise	-2749 Jul 19 j 13:51	17°♏37'17	
	-2754 Dec 26 j 23:05	0°♂			-2749 Aug 07 j 23:38	0°♁	
evening set	-2754 Dec 29 j 03:07	1°♂40'54			-2749 Sep 23 j 19:28	0°♏	
	-2753 Feb 04 j 05:17	0°♁			-2749 Nov 09 j 09:17	0°♏	
					-2749 Dec 26 j 05:03	0°♏	
conjunction	-2753 Mar 02 j 17:38	19°♁35'52	0°-54'-6		-2748 Feb 12 j 18:56	0°♄	
minimum elong	-2753 Mar 02 j 20:02	19°♁40'14	0°54'08	desc. node	-2748 Mar 27 j 22:01	23°♏52'48	
	-2753 Mar 17 j 03:32	0°♂			-2748 Apr 11 j 04:37	0°♂	
max. Earth dist.	-2753 Apr 12 j 20:26	18°♂48'03	2.50864 AU	retrograde	-2748 May 18 j 11:50	7°♂57'49	
	-2753 Apr 29 j 04:08	0°♂		min. Earth dist.	-2748 Jun 17 j 07:23	3°♂04'07	0.37599 AU
morning rise	-2753 Apr 30 j 14:20	0°♂58'03		opposition	-2748 Jun 18 j 01:13	2°♂52'16	-5°-24'-47
asc. node	-2753 Jun 13 j 04:48	29°♂51'34		greatest brilliancy	-2748 Jun 17 j 19:32	2°♂56'02	-2.9m
	-2753 Jun 13 j 10:01	0°♂			-2748 Jun 29 j 15:27	30°♏	
	-2753 Jul 30 j 22:57	0°♏		direct	-2748 Jul 17 j 23:31	27°♏52'50	
	-2753 Sep 19 j 14:14	0°♁			-2748 Aug 05 j 04:16	0°♂	
	-2753 Nov 17 j 20:42	0°♏			-2748 Oct 09 j 22:03	0°♂	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 16

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2748 Nov 27 j 00:54	0°♊		desc. node	-2743 Nov 17 j 20:08	21°♎45'49	
	-2747 Jan 12 j 09:54	0°♋		morning rise	-2743 Nov 24 j 08:51	26°♎45'54	
asc. node	-2747 Feb 01 j 23:39	13°♋16'57			-2743 Nov 28 j 13:52	0°♌	
	-2747 Feb 28 j 01:00	0°♌			-2742 Jan 06 j 05:18	0°♍	
	-2747 Apr 16 j 06:06	0°♍			-2742 Feb 13 j 18:20	0°♎	
evening set	-2747 May 24 j 13:28	24°♍13'39			-2742 Mar 25 j 02:56	0°♏	
	-2747 Jun 02 j 16:02	0°♐			-2742 May 05 j 07:46	0°♋	
max. Earth dist.	-2747 Jun 30 j 18:23	17°♐53'44	2.66473 AU		-2742 Jun 18 j 19:55	0°♌	
					-2742 Aug 09 j 12:44	0°♍	
conjunction	-2747 Jul 10 j 02:01	23°♐52'16	1°07'09	asc. node	-2742 Sep 24 j 21:48	17°♍49'41	
minimum elong	-2747 Jul 10 j 01:16	23°♐51'04	1°07'13	retrograde	-2742 Oct 13 j 21:14	20°♍00'15	
	-2747 Jul 19 j 14:28	0°♑		min. Earth dist.	-2742 Nov 20 j 18:03	10°♍59'36	0.65671 AU
morning rise	-2747 Aug 24 j 03:11	23°♑09'46		opposition	-2742 Nov 22 j 23:32	10°♍05'50	2°11'10
	-2747 Sep 03 j 11:20	0°♒		greatest brilliancy	-2742 Nov 22 j 16:31	10°♍12'54	-1.3m
	-2747 Oct 18 j 00:17	0°♓		direct	-2741 Jan 01 j 12:13	0°♍38'50	
	-2747 Nov 30 j 06:08	0°♈			-2741 Mar 30 j 01:56	0°♐	
	-2746 Jan 11 j 11:34	0°♌			-2741 May 21 j 22:53	0°♑	
desc. node	-2746 Feb 12 j 21:41	23°♌18'16			-2741 Jul 08 j 03:24	0°♒	
	-2746 Feb 22 j 05:16	0°♍			-2741 Aug 20 j 18:30	0°♓	
	-2746 Apr 05 j 16:51	0°♎		evening set	-2741 Sep 28 j 18:25	28°♓30'16	
	-2746 May 22 j 15:19	0°♏			-2741 Sep 30 j 18:16	0°♈	
retrograde	-2746 Jul 24 j 14:33	21°♏39'24		desc. node	-2741 Oct 05 j 18:16	3°♈45'54	
min. Earth dist.	-2746 Aug 21 j 16:11	16°♏18'46	0.45857 AU	max. Earth dist.	-2741 Oct 29 j 16:45	22°♈03'23	2.38731 AU
greatest brilliancy	-2746 Aug 27 j 22:22	14°♏09'08	-2.3m		-2741 Nov 08 j 22:45	0°♌	
opposition	-2746 Aug 29 j 18:46	13°♏30'36	-5°-8'-8				
direct	-2746 Oct 01 j 07:37	6°♏54'13		conjunction	-2741 Nov 27 j 15:15	14°♌36'34	0°-35'-25
	-2746 Dec 12 j 09:56	0°♋		minimum elong	-2741 Nov 27 j 12:39	14°♌31'27	0°35'27
asc. node	-2746 Dec 20 j 22:54	4°♋24'27			-2741 Dec 17 j 04:48	0°♍	
	-2745 Feb 04 j 17:42	0°♌			-2740 Jan 24 j 10:04	0°♎	
	-2745 Mar 27 j 02:28	0°♍		morning rise	-2740 Feb 03 j 08:39	7°♎43'15	
	-2745 May 14 j 22:52	0°♐			-2740 Mar 03 j 11:46	0°♏	
evening set	-2745 Jul 01 j 15:06	0°♑10'42			-2740 Apr 13 j 05:16	0°♋	
	-2745 Jul 01 j 08:27	0°♒			-2740 May 26 j 08:33	0°♌	
max. Earth dist.	-2745 Jul 25 j 23:41	16°♒02'41	2.61022 AU		-2740 Jul 11 j 20:27	0°♍	
	-2745 Aug 15 j 23:11	0°♓		asc. node	-2740 Aug 11 j 21:14	18°♍20'00	
					-2740 Sep 02 j 13:42	0°♐	
conjunction	-2745 Aug 17 j 11:24	1°♓00'52	1°06'47	retrograde	-2740 Nov 16 j 13:08	23°♐48'47	
minimum elong	-2745 Aug 17 j 12:14	1°♓02'16	1°06'50	opposition	-2740 Dec 26 j 04:41	14°♐21'46	4°08'41
	-2745 Sep 28 j 15:11	0°♓		greatest brilliancy	-2740 Dec 26 j 09:49	14°♐16'41	-1.2m
morning rise	-2745 Oct 03 j 21:59	3°♓43'17		min. Earth dist.	-2740 Dec 27 j 18:50	13°♐43'52	0.67089 AU
	-2745 Nov 09 j 11:21	0°♈		direct	-2739 Feb 05 j 06:03	4°♐24'32	
	-2745 Dec 19 j 20:53	0°♌			-2739 Apr 25 j 03:51	0°♑	
desc. node	-2745 Dec 31 j 20:45	9°♌03'37			-2739 Jun 15 j 17:21	0°♒	
	-2744 Jan 28 j 09:15	0°♍			-2739 Jul 30 j 14:47	0°♓	
	-2744 Mar 07 j 19:25	0°♎		desc. node	-2739 Aug 22 j 16:17	16°♓29'54	
	-2744 Apr 17 j 06:42	0°♏			-2739 Sep 09 j 22:29	0°♈	
	-2744 May 30 j 18:07	0°♋			-2739 Oct 19 j 03:13	0°♌	
	-2744 Jul 22 j 17:40	0°♌			-2739 Nov 26 j 07:54	0°♍	
retrograde	-2744 Sep 07 j 03:59	12°♌02'26		evening set	-2739 Dec 01 j 15:45	4°♍12'05	
min. Earth dist.	-2744 Oct 10 j 13:58	4°♌33'48	0.58059 AU		-2738 Jan 03 j 13:02	0°♎	
opposition	-2744 Oct 16 j 11:08	2°♌15'04	0°-55'-33				
greatest brilliancy	-2744 Oct 16 j 04:21	2°♌21'45	-1.7m	conjunction	-2738 Feb 05 j 15:24	25°♎26'18	-1°-5'-25
	-2744 Oct 22 j 07:45	30°♋		minimum elong	-2738 Feb 05 j 16:39	25°♎28'39	1°05'30
asc. node	-2744 Nov 06 j 22:46	25°♋22'10			-2738 Feb 11 j 16:27	0°♏	
direct	-2744 Nov 22 j 04:59	23°♋48'59			-2738 Mar 24 j 11:32	0°♋	
	-2744 Dec 26 j 07:29	0°♌		max. Earth dist.	-2738 Mar 25 j 19:43	0°♋57'42	2.45694 AU
	-2743 Mar 02 j 01:31	0°♍		morning rise	-2738 Apr 10 j 00:46	11°♋45'20	
	-2743 Apr 23 j 17:39	0°♐			-2738 May 06 j 10:00	0°♌	
	-2743 Jun 11 j 12:19	0°♑			-2738 Jun 20 j 18:22	0°♍	
	-2743 Jul 27 j 10:39	0°♒		asc. node	-2738 Jun 29 j 21:18	5°♍50'03	
evening set	-2743 Aug 10 j 07:47	9°♒25'02			-2738 Aug 07 j 22:23	0°♐	
max. Earth dist.	-2743 Aug 25 j 20:21	20°♒09'11	2.50820 AU		-2738 Sep 29 j 22:15	0°♑	
	-2743 Sep 08 j 19:48	0°♓		retrograde	-2738 Dec 24 j 02:25	28°♑26'26	
				opposition	-2737 Jan 31 j 04:38	19°♑49'55	4°55'07
conjunction	-2743 Sep 30 j 00:16	15°♓15'14	0°31'46	greatest brilliancy	-2737 Feb 01 j 08:33	19°♑23'03	-1.5m
minimum elong	-2743 Sep 30 j 01:48	15°♓18'00	0°31'46	min. Earth dist.	-2737 Feb 05 j 14:44	17°♑44'52	0.62043 AU
	-2743 Oct 20 j 00:21	0°♈		direct	-2737 Mar 13 j 07:04	9°♑54'17	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 17

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2737 May 17 j 18:55	0°♈				-2732 Jun 09 j 12:11	0°♈	
	-2737 Jul 07 j 07:45	0°♍		max. Earth dist.		-2732 Jun 21 j 12:36	7°♈39'18	2.67185 AU
desc. node	-2737 Jul 10 j 15:00	2°♍11'15						
	-2737 Aug 19 j 07:36	0°♊		conjunction		-2732 Jun 25 j 15:11	10°♈16'26	0°59'48
	-2737 Sep 28 j 04:36	0°♋		minimum elong		-2732 Jun 25 j 14:03	10°♈14'38	0°59'52
	-2737 Nov 05 j 18:50	0°♌				-2732 Jul 26 j 10:22	0°♍	
	-2737 Dec 14 j 08:40	0°♍		morning rise		-2732 Aug 09 j 17:03	9°♍12'53	
evening set	-2736 Jan 22 j 21:47	0°♎				-2732 Sep 10 j 14:06	0°♈	
	-2736 Feb 06 j 11:41	10°♎46'20				-2732 Oct 25 j 17:31	0°♍	
	-2736 Mar 04 j 02:51	0°♏				-2732 Dec 08 j 22:36	0°♊	
						-2731 Jan 21 j 13:48	0°♋	
conjunction	-2736 Apr 04 j 08:42	21°♏49'28	0°-24'-36	desc. node		-2731 Mar 01 j 15:06	26°♋44'50	
minimum elong	-2736 Apr 04 j 10:00	21°♏51'41	0°24'37			-2731 Mar 06 j 10:43	0°♌	
	-2736 Apr 16 j 08:23	0°♎				-2731 Apr 22 j 07:40	0°♍	
max. Earth dist.	-2736 May 02 j 19:38	11°♎04'20	2.57788 AU	retrograde		-2731 Jul 01 j 23:32	25°♍53'32	
asc. node	-2736 May 16 j 19:39	20°♎20'53		min. Earth dist.		-2731 Jul 28 j 17:14	21°♍15'45	0.41210 AU
morning rise	-2736 May 27 j 09:32	27°♎16'51		greatest brilliancy		-2731 Aug 02 j 20:48	19°♍40'13	-2.6m
	-2736 May 31 j 13:41	0°♏		opposition		-2731 Aug 04 j 18:38	19°♍04'25	-6°-27'-5
	-2736 Jul 17 j 12:42	0°♈		direct		-2731 Sep 04 j 14:24	13°♍22'26	
	-2736 Sep 04 j 03:51	0°♍				-2731 Nov 01 j 08:49	0°♎	
	-2736 Oct 25 j 13:44	0°♈				-2731 Dec 26 j 08:31	0°♏	
	-2736 Dec 26 j 05:45	0°♍		asc. node		-2730 Jan 06 j 13:58	6°♏39'10	
retrograde	-2735 Feb 08 j 06:13	9°♍32'30				-2730 Feb 14 j 03:46	0°♎	
opposition	-2735 Mar 15 j 07:10	2°♍20'56	3°39'11			-2730 Apr 03 j 21:38	0°♏	
greatest brilliancy	-2735 Mar 16 j 22:02	1°♍46'39	-2.0m			-2730 May 22 j 01:10	0°♈	
	-2735 Mar 21 j 22:55	30°♋02		evening set		-2730 Jun 16 j 19:14	16°♈17'03	
min. Earth dist.	-2735 Mar 23 j 14:52	29°♋25'29	0.51060 AU			-2730 Jul 08 j 04:48	0°♍	
direct	-2735 Apr 22 j 23:26	23°♋32'04		max. Earth dist.		-2730 Jul 15 j 22:15	5°♍00'02	2.63788 AU
	-2735 May 25 j 16:25	0°♍						
desc. node	-2735 May 27 j 14:09	0°♍42'32		conjunction		-2730 Aug 02 j 03:45	16°♍15'27	1°10'33
	-2735 Jul 21 j 07:35	0°♊		minimum elong		-2730 Aug 02 j 03:56	16°♍15'44	1°10'36
	-2735 Sep 02 j 14:44	0°♋				-2730 Aug 22 j 20:54	0°♈	
	-2735 Oct 12 j 22:05	0°♌		morning rise		-2730 Sep 17 j 03:32	17°♈06'30	
	-2735 Nov 21 j 17:16	0°♍				-2730 Oct 05 j 19:40	0°♍	
	-2734 Jan 01 j 07:30	0°♎				-2730 Nov 17 j 02:41	0°♊	
	-2734 Feb 12 j 10:36	0°♏				-2730 Dec 28 j 01:26	0°♋	
	-2734 Mar 28 j 09:34	0°♎		desc. node		-2729 Jan 17 j 14:43	15°♋19'27	
evening set	-2734 Mar 29 j 10:34	0°♎41'47				-2729 Feb 06 j 04:22	0°♌	
asc. node	-2734 Apr 03 j 17:10	4°♎12'49				-2729 Mar 18 j 07:02	0°♍	
	-2734 May 13 j 00:19	0°♏				-2729 Apr 28 j 20:08	0°♎	
						-2729 Jun 14 j 05:36	0°♏	
conjunction	-2734 May 19 j 02:55	3°♏57'09	0°25'24	retrograde		-2729 Aug 23 j 01:43	24°♏47'17	
minimum elong	-2734 May 19 j 01:57	3°♏55'36	0°25'27	min. Earth dist.		-2729 Sep 23 j 09:18	18°♏05'31	0.53609 AU
max. Earth dist.	-2734 May 29 j 21:52	10°♏54'18	2.65176 AU	opposition		-2729 Sep 30 j 12:43	15°♏22'06	-2°-28'-34
	-2734 Jun 28 j 18:22	0°♈		greatest brilliancy		-2729 Sep 29 j 15:48	15°♏42'06	-1.9m
morning rise	-2734 Jul 05 j 09:55	4°♈13'53		direct		-2729 Nov 04 j 19:36	7°♏31'54	
	-2734 Aug 15 j 01:12	0°♍		asc. node		-2729 Nov 24 j 12:57	9°♏50'20	
	-2734 Oct 01 j 13:47	0°♈				-2728 Jan 16 j 05:05	0°♎	
	-2734 Nov 18 j 16:17	0°♍				-2728 Mar 11 j 21:32	0°♏	
	-2733 Jan 07 j 22:07	0°♊				-2728 May 01 j 13:54	0°♈	
	-2733 Mar 09 j 13:58	0°♋				-2728 Jun 18 j 16:14	0°♍	
desc. node	-2733 Apr 14 j 13:36	8°♋02'23		evening set		-2728 Jul 24 j 21:37	23°♍37'21	
retrograde	-2733 Apr 17 j 12:41	8°♋05'39				-2728 Aug 03 j 10:18	0°♈	
opposition	-2733 May 18 j 06:08	2°♋53'37	-2°-21'-13	max. Earth dist.		-2728 Aug 12 j 02:33	5°♈52'05	2.55305 AU
greatest brilliancy	-2733 May 18 j 18:24	2°♋45'06	-2.8m					
min. Earth dist.	-2733 May 22 j 20:13	1°♋37'09	0.39107 AU	conjunction		-2728 Sep 11 j 12:42	26°♈55'26	0°49'57
	-2733 May 28 j 23:52	30°♋08		minimum elong		-2728 Sep 11 j 14:19	26°♈58'16	0°49'58
direct	-2733 Jun 19 j 08:58	27°♊08'03				-2728 Sep 15 j 21:16	0°♍	
	-2733 Jul 10 j 06:32	0°♋				-2728 Oct 27 j 07:01	0°♊	
	-2733 Sep 10 j 04:07	0°♌		morning rise		-2728 Nov 01 j 21:15	4°♊09'06	
	-2733 Oct 25 j 22:16	0°♍		desc. node		-2728 Dec 04 j 12:45	28°♊46'38	
	-2733 Dec 08 j 21:37	0°♎				-2728 Dec 06 j 03:11	0°♋	
	-2732 Jan 22 j 07:17	0°♏				-2727 Jan 14 j 01:24	0°♌	
asc. node	-2732 Feb 19 j 15:30	18°♏46'30				-2727 Feb 21 j 20:34	0°♍	
	-2732 Mar 07 j 19:34	0°♎				-2727 Apr 02 j 11:38	0°♎	
	-2732 Apr 23 j 09:24	0°♏				-2727 May 14 j 04:03	0°♏	
evening set	-2732 May 09 j 12:03	10°♏16'21				-2727 Jun 29 j 01:50	0°♎	

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2727 Aug 28 j 05:07	0°♄			-2722 May 30 j 14:34	0°♈		
retrograde	-2727 Sep 30 j 04:10	6°♄14'30			-2722 Jul 16 j 19:04	0°♍		
asc. node	-2727 Oct 11 j 13:12	5°♄20'43		desc. node	-2722 Jul 27 j 07:41	7°♍15'47		
	-2727 Oct 30 j 16:13	30°♋♿			-2722 Aug 27 j 21:02	0°♎		
min. Earth dist.	-2727 Nov 05 j 10:08	27°♿45'58	0.63369 AU		-2722 Oct 06 j 09:04	0°♌		
opposition	-2727 Nov 09 j 02:45	26°♿17'05	1°07'44		-2722 Nov 13 j 17:57	0°♊		
greatest brilliancy	-2727 Nov 08 j 20:50	26°♿23'02	-1.5m		-2722 Dec 22 j 02:55	0°♐		
direct	-2727 Dec 17 j 16:30	17°♿09'46		evening set	-2721 Jan 13 j 00:03	16°♐49'13		
	-2726 Feb 08 j 04:30	0°♄			-2721 Jan 30 j 10:41	0°♏		
	-2726 Apr 09 j 06:54	0°♀			-2721 Mar 12 j 10:20	0°♑		
	-2726 May 29 j 23:37	0°♅						
	-2726 Jul 15 j 13:02	0°♈		conjunction	-2721 Mar 15 j 14:37	2°♑16'03	0°-44'-20	
	-2726 Aug 28 j 00:34	0°♍		minimum elong	-2721 Mar 15 j 16:51	2°♑20'02	0°44'21	
evening set	-2726 Sep 07 j 23:52	7°♍52'04		max. Earth dist.	-2721 Apr 21 j 03:19	27°♑43'42	2.53504 AU	
max. Earth dist.	-2726 Sep 25 j 06:39	20°♍29'29	2.43141 AU		-2721 Apr 24 j 11:20	0°♉		
	-2726 Oct 08 j 01:25	0°♎		morning rise	-2721 May 11 j 04:14	11°♉15'16		
desc. node	-2726 Oct 22 j 11:02	10°♎52'13		asc. node	-2721 Jun 03 j 11:34	26°♉38'06		
					-2721 Jun 08 j 15:39	0°♄		
conjunction	-2726 Nov 02 j 15:31	19°♎25'06	0°-7'-46		-2721 Jul 25 j 21:31	0°♀		
minimum elong	-2726 Nov 02 j 14:58	19°♎24'02	0°07'49		-2721 Sep 13 j 14:23	0°♅		
behind sun begin	-2726 Nov 01 j 16:37	18°♎41'10			-2721 Nov 07 j 17:37	0°♈		
behind sun end	-2726 Nov 03 j 13:19	20°♎06'57		retrograde	-2720 Jan 20 j 03:13	22°♈24'41		
	-2726 Nov 16 j 08:35	0°♌		opposition	-2720 Feb 25 j 13:44	14°♈34'29	4°30'35	
	-2726 Dec 24 j 17:28	0°♊		greatest brilliancy	-2720 Feb 27 j 04:56	13°♈58'17	-1.7m	
morning rise	-2725 Jan 05 j 01:42	8°♊54'40		min. Earth dist.	-2720 Mar 04 j 01:07	11°♈49'16	0.55935 AU	
	-2725 Feb 01 j 00:45	0°♐		direct	-2720 Apr 05 j 14:33	5°♈07'22		
	-2725 Mar 12 j 03:43	0°♏		desc. node	-2720 Jun 13 j 06:55	28°♈05'21		
	-2725 Apr 21 j 23:16	0°♑			-2720 Jun 16 j 16:24	0°♍		
	-2725 Jun 04 j 09:27	0°♉			-2720 Aug 02 j 12:33	0°♎		
	-2725 Jul 21 j 23:09	0°♄			-2720 Sep 12 j 18:04	0°♌		
asc. node	-2725 Aug 29 j 13:14	21°♄05'48			-2720 Oct 22 j 02:12	0°♊		
	-2725 Sep 18 j 05:20	0°♀			-2720 Nov 30 j 05:37	0°♐		
retrograde	-2725 Nov 04 j 00:28	10°♀59'44			-2719 Jan 09 j 06:51	0°♏		
opposition	-2725 Dec 13 j 23:02	1°♀19'20	3°30'52		-2719 Feb 19 j 23:01	0°♑		
greatest brilliancy	-2725 Dec 13 j 21:27	1°♀20'54	-1.2m	evening set	-2719 Mar 10 j 20:12	13°♑09'36		
min. Earth dist.	-2725 Dec 14 j 01:05	1°♀17'16	0.67293 AU		-2719 Apr 04 j 13:13	0°♉		
	-2725 Dec 17 j 06:29	30°♋♾		asc. node	-2719 Apr 20 j 09:17	10°♉35'21		
direct	-2724 Jan 23 j 13:29	21°♋30'45						
	-2724 Mar 04 j 20:38	0°♀		conjunction	-2719 May 02 j 20:15	18°♉49'21	0°07'14	
	-2724 May 06 j 01:17	0°♅		minimum elong	-2719 May 02 j 19:56	18°♉48'50	0°07'15	
	-2724 Jun 24 j 05:03	0°♈		behind sun begin	-2719 May 02 j 00:56	18°♉17'37		
	-2724 Aug 07 j 10:45	0°♍		behind sun end	-2719 May 03 j 14:55	19°♉20'02		
desc. node	-2724 Sep 08 j 09:41	23°♍09'09			-2719 May 19 j 22:38	0°♄		
	-2724 Sep 17 j 13:53	0°♎		max. Earth dist.	-2719 May 20 j 01:36	0°♄04'49	2.62921 AU	
	-2724 Oct 26 j 17:29	0°♌		morning rise	-2719 Jun 20 j 20:59	20°♄34'03		
evening set	-2724 Nov 04 j 14:50	6°♌56'42			-2719 Jul 05 j 16:28	0°♀		
	-2724 Dec 03 j 21:45	0°♊			-2719 Aug 22 j 07:51	0°♅		
					-2719 Oct 09 j 20:57	0°♈		
conjunction	-2723 Jan 09 j 04:07	28°♊30'49	-1°-4'-37		-2719 Nov 29 j 12:03	0°♍		
minimum elong	-2723 Jan 09 j 02:31	28°♊27'42	1°04'41		-2718 Jan 27 j 08:25	0°♎		
	-2723 Jan 11 j 01:50	0°♐		retrograde	-2718 Mar 18 j 10:25	12°♎14'42		
	-2723 Feb 19 j 03:17	0°♏		opposition	-2718 Apr 19 j 21:43	6°♎17'45	0°43'52	
max. Earth dist.	-2723 Feb 26 j 08:02	5°♏24'26	2.40494 AU	greatest brilliancy	-2718 Apr 20 j 06:49	6°♎10'42	-2.5m	
morning rise	-2723 Mar 17 j 12:52	19°♏37'19		min. Earth dist.	-2718 Apr 27 j 14:34	3°♎55'18	0.43096 AU	
	-2723 Mar 31 j 20:18	0°♑		desc. node	-2718 May 01 j 07:31	2°♎50'46		
	-2723 May 13 j 18:21	0°♉			-2718 May 14 j 04:34	30°♋♿		
	-2723 Jun 28 j 08:41	0°♄		direct	-2718 May 24 j 23:27	29°♍11'29		
asc. node	-2723 Jul 16 j 12:14	11°♄23'03			-2718 Jun 04 j 21:46	0°♎		
	-2723 Aug 16 j 13:32	0°♀			-2718 Aug 11 j 18:31	0°♌		
	-2723 Oct 13 j 04:49	0°♅			-2718 Sep 25 j 08:04	0°♊		
retrograde	-2723 Dec 08 j 20:16	14°♅45'35			-2718 Nov 06 j 07:25	0°♐		
opposition	-2722 Jan 16 j 16:25	5°♅46'20	4°47'01		-2718 Dec 18 j 08:37	0°♏		
greatest brilliancy	-2722 Jan 17 j 11:01	5°♅28'08	-1.3m		-2717 Jan 30 j 13:37	0°♑		
min. Earth dist.	-2722 Jan 20 j 14:55	4°♅13'56	0.64776 AU	asc. node	-2717 Mar 08 j 06:24	24°♑41'11		
	-2722 Feb 01 j 07:22	30°♋♿			-2717 Mar 16 j 07:12	0°♉		
direct	-2722 Feb 26 j 23:09	25°♿45'16		evening set	-2717 Apr 24 j 21:35	25°♿48'26		
	-2722 Mar 26 j 13:33	0°♅			-2717 May 01 j 09:45	0°♄		

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 19

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

conjunction	-2717 Jun 12 j 01:24	26°♄39'07	0°48'56			-2712 Jul 11 j 19:23	0°♁	
minimum elong	-2717 Jun 12 j 00:07	26°♄37'04	0°48'59	retrograde		-2712 Sep 15 j 19:54	21°♁30'43	
max. Earth dist.	-2717 Jun 13 j 12:23	27°♄34'51	2.67049 AU	min. Earth dist.		-2712 Oct 20 j 07:16	13°♁38'53	0.60186 AU
	-2717 Jun 17 j 07:28	0°♂		opposition		-2712 Oct 25 j 10:02	11°♁36'55	0°-6'-58
morning rise	-2717 Jul 27 j 15:14	25°♂43'56		greatest brilliancy		-2712 Dec 23 j 01:11	5°♁27'50	-2.1m
	-2717 Aug 03 j 07:13	0°♄		asc. node		-2712 Oct 28 j 04:34	10°♁31'16	
	-2717 Sep 18 j 20:28	0°♂		direct		-2712 Dec 01 j 20:26	2°♁54'19	
	-2717 Nov 03 j 19:45	0°♁				-2711 Feb 22 j 16:49	0°♄	
	-2717 Dec 19 j 11:41	0°♂				-2711 Apr 18 j 05:19	0°♂	
	-2716 Feb 03 j 14:34	0°♂				-2711 Jun 06 j 14:07	0°♄	
desc. node	-2716 Mar 18 j 07:32	26°♂55'00				-2711 Jul 22 j 17:45	0°♂	
	-2716 Mar 23 j 16:48	0°♄		evening set		-2711 Aug 20 j 07:00	19°♂31'38	
retrograde	-2716 Jun 04 j 20:16	25°♄57'32		max. Earth dist.		-2711 Sep 04 j 08:16	0°♁07'34	2.48132 AU
min. Earth dist.	-2716 Jul 02 j 11:22	21°♄27'16	0.38143 AU			-2711 Sep 04 j 04:01	0°♁	
greatest brilliancy	-2716 Jul 05 j 02:07	20°♄44'24	-2.8m					
opposition	-2716 Jul 06 j 02:00	20°♄28'01	-6°-24'-40	conjunction		-2711 Oct 11 j 11:39	27°♁08'37	0°18'40
direct	-2716 Aug 04 j 19:41	15°♄26'32		minimum elong		-2711 Oct 11 j 12:43	27°♁10'35	0°18'40
	-2716 Sep 26 j 04:18	0°♄				-2711 Oct 15 j 07:42	0°♂	
	-2716 Nov 19 j 02:02	0°♂		desc. node		-2711 Nov 08 j 04:19	18°♂00'42	
	-2715 Jan 06 j 06:05	0°♄				-2711 Nov 23 j 19:10	0°♂	
asc. node	-2715 Jan 23 j 05:36	10°♄44'06		morning rise		-2711 Dec 08 j 13:01	11°♂25'19	
	-2715 Feb 22 j 17:09	0°♁				-2710 Jan 01 j 08:17	0°♄	
	-2715 Apr 11 j 08:53	0°♄				-2710 Feb 08 j 18:56	0°♄	
	-2715 May 29 j 00:09	0°♂				-2710 Mar 20 j 00:31	0°♂	
evening set	-2715 Jun 02 j 01:47	2°♂34'27				-2710 Apr 30 j 00:13	0°♄	
max. Earth dist.	-2715 Jul 06 j 06:01	24°♂21'34	2.65747 AU			-2710 Jun 12 j 22:50	0°♁	
	-2715 Jul 15 j 00:13	0°♄				-2710 Aug 01 j 11:37	0°♄	
				asc. node		-2710 Sep 15 j 04:22	20°♄49'53	
conjunction	-2715 Jul 18 j 10:00	2°♄12'05	1°09'38	retrograde		-2710 Oct 21 j 15:13	28°♄02'12	
minimum elong	-2715 Jul 18 j 09:33	2°♄11'22	1°09'42	min. Earth dist.		-2710 Nov 29 j 07:05	18°♄45'40	0.66517 AU
	-2715 Aug 29 j 19:27	0°♂		opposition		-2710 Nov 30 j 16:58	18°♄11'35	2°43'21
morning rise	-2715 Sep 01 j 15:16	1°♂53'00		greatest brilliancy		-2710 Nov 30 j 10:59	18°♄17'37	-1.3m
	-2715 Oct 13 j 02:57	0°♁		direct		-2709 Jan 09 j 15:47	8°♄35'44	
	-2715 Nov 24 j 23:51	0°♂				-2709 Mar 22 j 07:15	0°♂	
	-2714 Jan 05 j 16:24	0°♂				-2709 May 16 j 08:28	0°♄	
desc. node	-2714 Feb 03 j 07:06	20°♂54'27				-2709 Jul 03 j 03:35	0°♂	
	-2714 Feb 15 j 16:54	0°♄				-2709 Aug 15 j 23:35	0°♁	
	-2714 Mar 29 j 00:26	0°♄		desc. node		-2709 Sep 26 j 02:45	0°♂03'55	
	-2714 May 11 j 21:59	0°♂				-2709 Sep 26 j 00:40	0°♂	
	-2714 Jul 08 j 19:14	0°♄		evening set		-2709 Oct 11 j 17:14	11°♂53'05	
retrograde	-2714 Aug 05 j 00:16	4°♄51'54				-2709 Nov 04 j 04:44	0°♂	
	-2714 Aug 31 j 08:48	30°♄				-2709 Dec 12 j 09:58	0°♄	
min. Earth dist.	-2714 Sep 03 j 03:48	29°♄02'18	0.48666 AU					
greatest brilliancy	-2714 Sep 09 j 14:59	26°♄42'27	-2.2m	conjunction		-2709 Dec 13 j 00:33	0°♄28'45	0°-49'-14
opposition	-2714 Sep 11 j 03:53	26°♄08'59	-4°-10'-40	minimum elong		-2709 Dec 12 j 21:25	0°♄22'35	0°49'17
direct	-2714 Oct 14 j 18:10	19°♄03'42		max. Earth dist.		-2709 Dec 12 j 19:21	0°♄18'31	2.37459 AU
	-2714 Nov 29 j 21:51	0°♄				-2708 Jan 19 j 14:26	0°♄	
asc. node	-2714 Dec 11 j 05:22	4°♄52'48		morning rise		-2708 Feb 19 j 17:29	24°♄00'10	
	-2713 Jan 28 j 22:00	0°♁				-2708 Feb 27 j 15:21	0°♂	
	-2713 Mar 21 j 15:52	0°♄				-2708 Apr 08 j 07:44	0°♄	
	-2713 May 10 j 01:26	0°♂				-2708 May 21 j 07:32	0°♁	
	-2713 Jun 26 j 16:30	0°♄				-2708 Jul 06 j 08:28	0°♄	
evening set	-2713 Jul 10 j 07:23	8°♄48'19		asc. node		-2708 Aug 02 j 04:16	16°♄18'26	
max. Earth dist.	-2713 Aug 01 j 08:27	23°♄18'22	2.59194 AU			-2708 Aug 26 j 07:16	0°♂	
	-2713 Aug 11 j 08:46	0°♂				-2708 Nov 07 j 17:52	0°♄	
				retrograde		-2708 Nov 24 j 11:48	1°♄37'40	
conjunction	-2713 Aug 26 j 14:51	10°♂20'08	1°02'14			-2708 Dec 10 j 08:16	30°♄	
minimum elong	-2713 Aug 26 j 16:03	10°♂22'11	1°02'16	opposition		-2707 Jan 02 j 21:29	22°♂19'33	4°25'51
	-2713 Sep 23 j 23:18	0°♁		greatest brilliancy		-2707 Jan 03 j 07:07	22°♂10'02	-1.3m
morning rise	-2713 Oct 14 j 04:02	14°♁22'29		min. Earth dist.		-2707 Jan 05 j 07:37	21°♂22'01	0.66555 AU
	-2713 Nov 04 j 16:02	0°♂		direct		-2707 Feb 13 j 02:12	12°♂19'26	
	-2713 Dec 14 j 20:32	0°♂				-2707 Apr 16 j 15:54	0°♄	
desc. node	-2713 Dec 22 j 06:21	5°♂37'14				-2707 Jun 09 j 20:39	0°♂	
	-2712 Jan 23 j 03:15	0°♄				-2707 Jul 25 j 10:05	0°♁	
	-2712 Mar 02 j 06:44	0°♄		desc. node		-2707 Aug 13 j 02:09	13°♁12'27	
	-2712 Apr 11 j 08:02	0°♂				-2707 Sep 04 j 23:41	0°♂	
	-2712 May 23 j 21:24	0°♄				-2707 Oct 14 j 06:33	0°♂	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 20

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

greatest brilliancy	-2707 Nov 10 j 09:13	21° \mathbb{M} 14'17	1.2m			-2702 Jun 24 j 03:23	0° \mathbb{I}	
	-2707 Nov 21 j 12:11	0° \mathcal{A}		morning rise		-2702 Jul 13 j 14:02	12° \mathbb{I} 22'52	
evening set	-2707 Dec 17 j 06:03	20° \mathcal{A} 14'48				-2702 Aug 10 j 06:52	0° \mathfrak{S}	
	-2707 Dec 29 j 17:53	0° \mathfrak{Z}				-2702 Sep 26 j 09:38	0° \mathcal{Q}	
	-2706 Feb 06 j 21:45	0° \approx				-2702 Nov 12 j 13:43	0° \mathbb{M}	
						-2702 Dec 30 j 14:46	0° \mathfrak{L}	
conjunction	-2706 Feb 20 j 05:22	9° \approx 56'35	-1°00'-3			-2701 Feb 20 j 07:08	0° \mathbb{M}	
minimum elong	-2706 Feb 20 j 07:33	10° \approx 00'38	1°00'07	desc. node		-2701 Apr 05 j 00:01	19° \mathbb{M} 33'55	
	-2706 Mar 19 j 17:20	0° \mathcal{H}		retrograde		-2701 May 05 j 10:14	24° \mathbb{M} 54'26	
max. Earth dist.	-2706 Apr 05 j 18:42	12° \mathcal{H} 06'39	2.48598 AU	opposition		-2701 Jun 04 j 20:27	19° \mathbb{M} 53'18	-4°-12'-18
morning rise	-2706 Apr 22 j 01:51	23° \mathcal{H} 26'49		greatest brilliancy		-2701 Jun 05 j 03:10	19° \mathbb{M} 48'48	-2.9m
	-2706 May 01 j 15:27	0° \mathcal{Y}		min. Earth dist.		-2701 Jun 06 j 14:56	19° \mathbb{M} 24'50	0.37888 AU
	-2706 Jun 15 j 20:51	0° \mathcal{B}		direct		-2701 Jul 05 j 12:53	14° \mathbb{M} 40'30	
asc. node	-2706 Jun 20 j 02:22	2° \mathcal{B} 43'39				-2701 Aug 27 j 04:43	0° \mathcal{A}	
	-2706 Aug 02 j 14:01	0° \mathbb{I}				-2701 Oct 17 j 12:05	0° \mathfrak{Z}	
	-2706 Sep 22 j 23:40	0° \mathfrak{S}				-2701 Dec 02 j 08:02	0° \approx	
	-2706 Nov 26 j 03:17	0° \mathcal{Q}				-2700 Jan 16 j 16:16	0° \mathcal{H}	
retrograde	-2705 Jan 02 j 10:27	7° \mathcal{Q} 05'19		asc. node		-2700 Feb 09 j 21:17	15° \mathcal{H} 50'44	
	-2705 Feb 05 j 14:40	30° \mathcal{R} \mathfrak{S}				-2700 Mar 02 j 17:30	0° \mathcal{Y}	
opposition	-2705 Feb 09 j 00:04	28° \mathfrak{S} 43'38	4°51'59			-2700 Apr 18 j 14:55	0° \mathcal{B}	
greatest brilliancy	-2705 Feb 10 j 08:47	28° \mathfrak{S} 12'31	-1.5m	evening set		-2700 May 18 j 04:43	18° \mathcal{B} 46'18	
min. Earth dist.	-2705 Feb 15 j 04:38	26° \mathfrak{S} 22'29	0.60125 AU			-2700 Jun 04 j 21:15	0° \mathbb{I}	
direct	-2705 Mar 21 j 19:57	18° \mathfrak{S} 54'49		max. Earth dist.		-2700 Jun 26 j 21:08	14° \mathbb{I} 00'21	2.66891 AU
	-2705 May 06 j 16:13	0° \mathcal{Q}						
	-2705 Jun 30 j 15:28	0° \mathbb{M}		conjunction		-2700 Jul 03 j 22:39	18° \mathbb{I} 31'14	1°04'31
desc. node	-2705 Jul 01 j 00:30	0° \mathbb{M} 14'23		minimum elong		-2700 Jul 03 j 21:43	18° \mathbb{I} 29'44	1°04'36
	-2705 Aug 13 j 14:34	0° \mathfrak{L}				-2700 Jul 21 j 19:42	0° \mathfrak{S}	
	-2705 Sep 22 j 20:40	0° \mathbb{M}		morning rise		-2700 Aug 17 j 22:36	17° \mathfrak{S} 35'34	
	-2705 Oct 31 j 15:55	0° \mathcal{A}				-2700 Sep 05 j 20:01	0° \mathcal{Q}	
	-2705 Dec 09 j 09:20	0° \mathfrak{Z}				-2700 Oct 20 j 15:32	0° \mathbb{M}	
	-2704 Jan 18 j 01:15	0° \approx				-2700 Dec 03 j 07:34	0° \mathfrak{L}	
evening set	-2704 Feb 19 j 04:53	23° \approx 27'57				-2699 Jan 15 j 02:30	0° \mathbb{M}	
	-2704 Feb 28 j 08:48	0° \mathcal{H}		desc. node		-2699 Feb 19 j 23:58	25° \mathbb{M} 20'37	
	-2704 Apr 11 j 15:58	0° \mathcal{Y}				-2699 Feb 26 j 15:00	0° \mathcal{A}	
						-2699 Apr 11 j 10:16	0° \mathfrak{Z}	
conjunction	-2704 Apr 15 j 04:54	2° \mathcal{Y} 23'32	0°-12'-45			-2699 Jun 02 j 01:19	0° \approx	
minimum elong	-2704 Apr 15 j 05:32	2° \mathcal{Y} 24'37	0°12'46	retrograde		-2699 Jul 15 j 05:51	11° \approx 22'57	
behind sun begin	-2704 Apr 14 j 16:16	2° \mathcal{Y} 02'14		min. Earth dist.		-2699 Aug 11 j 12:47	6° \approx 24'28	0.43660 AU
behind sun end	-2704 Apr 15 j 18:48	2° \mathcal{Y} 46'58		greatest brilliancy		-2699 Aug 17 j 11:09	4° \approx 27'06	-2.5m
asc. node	-2704 May 07 j 00:47	16° \mathcal{Y} 58'15		opposition		-2699 Aug 19 j 10:30	3° \approx 47'47	-5°-47'-56
max. Earth dist.	-2704 May 09 j 11:34	18° \mathcal{Y} 35'21	2.59821 AU			-2699 Sep 01 j 05:21	30° \mathcal{R} \mathfrak{Z}	
	-2704 May 26 j 21:30	0° \mathcal{B}		direct		-2699 Sep 20 j 03:30	27° \mathfrak{Z} 35'57	
morning rise	-2704 Jun 05 j 14:59	6° \mathcal{B} 18'36				-2699 Oct 10 j 00:12	0° \approx	
	-2704 Jul 12 j 17:17	0° \mathbb{I}				-2699 Dec 18 j 04:52	0° \mathcal{H}	
	-2704 Aug 29 j 21:40	0° \mathfrak{S}		asc. node		-2699 Dec 27 j 20:20	5° \mathcal{H} 21'22	
	-2704 Oct 18 j 23:44	0° \mathcal{Q}				-2698 Feb 08 j 04:02	0° \mathcal{Y}	
	-2704 Dec 13 j 11:31	0° \mathbb{M}				-2698 Mar 29 j 18:03	0° \mathcal{B}	
retrograde	-2703 Feb 20 j 23:39	20° \mathbb{M} 44'55				-2698 May 17 j 06:43	0° \mathbb{I}	
opposition	-2703 Mar 27 j 03:47	13° \mathbb{M} 58'08	2°50'49	evening set		-2698 Jun 25 j 06:31	24° \mathbb{I} 39'20	
greatest brilliancy	-2703 Mar 28 j 12:47	13° \mathbb{M} 30'02	-2.2m			-2698 Jul 03 j 14:08	0° \mathfrak{S}	
min. Earth dist.	-2703 Apr 04 j 14:59	11° \mathbb{M} 06'11	0.48178 AU	max. Earth dist.		-2698 Jul 21 j 17:45	11° \mathfrak{S} 46'49	2.62351 AU
direct	-2703 May 03 j 17:56	5° \mathbb{M} 39'46						
desc. node	-2703 May 17 j 23:16	7° \mathbb{M} 00'27		conjunction		-2698 Aug 10 j 20:08	25° \mathfrak{S} 02'29	1°08'57
	-2703 Jul 11 j 15:38	0° \mathfrak{L}		minimum elong		-2698 Aug 10 j 20:42	25° \mathfrak{S} 03'26	1°09'01
	-2703 Aug 26 j 11:42	0° \mathbb{M}				-2698 Aug 18 j 06:20	0° \mathcal{Q}	
	-2703 Oct 06 j 17:33	0° \mathcal{A}		morning rise		-2698 Sep 26 j 12:58	26° \mathcal{Q} 49'43	
	-2703 Nov 16 j 01:58	0° \mathfrak{Z}				-2698 Oct 01 j 02:03	0° \mathbb{M}	
	-2703 Dec 27 j 01:23	0° \approx				-2698 Nov 12 j 03:41	0° \mathfrak{L}	
	-2702 Feb 07 j 11:27	0° \mathcal{H}				-2698 Dec 22 j 19:15	0° \mathbb{M}	
	-2702 Mar 23 j 15:19	0° \mathcal{Y}		desc. node		-2697 Jan 07 j 22:39	12° \mathbb{M} 07'23	
asc. node	-2702 Mar 24 j 23:15	0° \mathcal{Y} 53'11				-2697 Jan 31 j 13:49	0° \mathcal{A}	
evening set	-2702 Apr 08 j 09:00	10° \mathcal{Y} 25'25				-2697 Mar 12 j 06:15	0° \mathfrak{Z}	
	-2702 May 08 j 09:02	0° \mathcal{B}				-2697 Apr 22 j 01:46	0° \approx	
						-2697 Jun 05 j 09:36	0° \mathcal{H}	
conjunction	-2702 May 28 j 00:47	12° \mathcal{B} 39'56	0°34'52			-2697 Aug 03 j 05:30	0° \mathcal{Y}	
minimum elong	-2702 May 27 j 23:36	12° \mathcal{B} 38'02	0°34'54	retrograde		-2697 Sep 01 j 11:32	5° \mathcal{Y} 19'14	
max. Earth dist.	-2702 Jun 04 j 11:03	17° \mathcal{B} 25'36	2.66063 AU			-2697 Sep 29 j 01:10	30° \mathcal{R} \mathcal{H}	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 21

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

min. Earth dist.	-2697 Oct 03 j 23:33	28° H 10'21	0.56155 AU			-2692 Oct 21 j 22:18	0° M	
opposition	-2697 Oct 10 j 10:23	25° H 39'45	-1°-33'-38	evening set		-2692 Nov 19 j 15:54	22° M 32'22	
greatest brilliancy	-2697 Oct 09 j 22:03	25° H 51'47	-1.8m			-2692 Nov 29 j 02:55	0° J	
asc. node	-2697 Nov 14 j 19:53	17° H 28'51				-2691 Jan 06 j 07:15	0° Z	
direct	-2697 Nov 15 j 12:38	17° H 28'39						
	-2696 Jan 05 j 11:38	0° Y		conjunction		-2691 Jan 24 j 20:54	14° Z 23'02	-1°-6'-48
	-2696 Mar 05 j 15:09	0° B		minimum elong		-2691 Jan 24 j 21:00	14° Z 23'14	1°06'53
	-2696 Apr 26 j 09:24	0° II				-2691 Feb 14 j 08:52	0° \approx	
	-2696 Jun 13 j 21:36	0° S		max. Earth dist.		-2691 Mar 15 j 15:20	21° \approx 43'09	2.43314 AU
	-2696 Jul 29 j 19:20	0° Q				-2691 Mar 27 j 01:42	0° H	
evening set	-2696 Aug 03 j 02:57	2° Q 54'33		morning rise		-2691 Mar 31 j 05:45	2° H 59'24	
max. Earth dist.	-2696 Aug 19 j 17:24	14° Q 14'24	2.52898 AU			-2691 May 08 j 22:22	0° Y	
	-2696 Sep 11 j 06:22	0° M				-2691 Jun 23 j 07:15	0° B	
				asc. node		-2691 Jul 06 j 18:31	8° B 33'42	
conjunction	-2696 Sep 21 j 19:00	7° M 30'24	0°40'15			-2691 Aug 10 j 18:33	0° II	
minimum elong	-2696 Sep 21 j 20:38	7° M 33'20	0°40'15			-2691 Oct 04 j 03:52	0° S	
	-2696 Oct 22 j 14:13	0° A		retrograde		-2691 Dec 17 j 11:02	22° S 57'12	
morning rise	-2696 Nov 14 j 05:05	16° A 58'18		opposition		-2690 Jan 24 j 21:33	14° S 09'55	4°53'10
desc. node	-2696 Nov 24 j 22:17	25° A 07'29		greatest brilliancy		-2690 Jan 25 j 21:20	13° S 46'50	-1.4m
	-2696 Dec 01 j 07:07	0° M		min. Earth dist.		-2690 Jan 29 j 15:35	12° S 19'16	0.63392 AU
	-2695 Jan 09 j 01:31	0° J		direct		-2690 Mar 07 j 02:26	4° S 10'46	
	-2695 Feb 16 j 16:49	0° Z				-2690 May 23 j 00:17	0° Q	
	-2695 Mar 28 j 03:00	0° \approx				-2690 Jul 10 j 22:36	0° M	
	-2695 May 08 j 10:39	0° H		desc. node		-2690 Jul 17 j 17:11	4° M 34'16	
	-2695 Jun 22 j 08:10	0° Y				-2690 Aug 22 j 13:23	0° A	
	-2695 Aug 15 j 03:03	0° B				-2690 Oct 01 j 06:43	0° M	
asc. node	-2695 Oct 01 j 19:00	14° B 25'25				-2690 Nov 08 j 18:22	0° J	
retrograde	-2695 Oct 08 j 03:18	14° B 41'00				-2690 Dec 17 j 05:29	0° Z	
min. Earth dist.	-2695 Nov 14 j 06:56	5° B 54'03	0.64769 AU			-2689 Jan 25 j 15:09	0° \approx	
opposition	-2695 Nov 17 j 04:06	4° B 44'28	1°45'59	evening set		-2689 Jan 27 j 03:52	1° \approx 08'33	
greatest brilliancy	-2695 Nov 16 j 20:54	4° B 51'44	-1.4m			-2689 Mar 07 j 16:30	0° H	
	-2695 Nov 29 j 17:53	30° R Y						
direct	-2695 Dec 26 j 06:39	25° Y 25'41		conjunction		-2689 Mar 27 j 16:38	14° H 06'39	0°-33'-14
	-2694 Jan 24 j 13:47	0° B		minimum elong		-2689 Mar 27 j 18:23	14° H 09'42	0°33'14
	-2694 Apr 02 j 19:24	0° II				-2689 Apr 19 j 18:41	0° Y	
	-2694 May 24 j 17:29	0° S		max. Earth dist.		-2689 Apr 28 j 15:42	6° Y 00'20	2.55959 AU
	-2694 Jul 10 j 16:48	0° Q		morning rise		-2689 May 21 j 05:00	21° Y 01'22	
	-2694 Aug 23 j 07:40	0° M		asc. node		-2689 May 24 j 17:10	23° Y 19'45	
evening set	-2694 Sep 19 j 10:44	19° M 38'33				-2689 Jun 03 j 22:09	0° B	
	-2694 Oct 03 j 09:10	0° A				-2689 Jul 20 j 22:40	0° II	
max. Earth dist.	-2694 Oct 11 j 14:04	6° A 10'37	2.40555 AU			-2689 Sep 07 j 22:39	0° S	
desc. node	-2694 Oct 12 j 20:44	7° A 08'39				-2689 Oct 30 j 13:52	0° Q	
	-2694 Nov 11 j 15:30	0° M				-2688 Jan 10 j 18:46	0° M	
				retrograde		-2688 Jan 31 j 05:18	2° M 19'56	
conjunction	-2694 Nov 16 j 08:45	3° M 40'09	0°-23'-39			-2688 Feb 19 j 08:52	30° R Q	
minimum elong	-2694 Nov 16 j 06:59	3° M 36'43	0°23'41	opposition		-2688 Mar 06 j 21:50	24° Q 49'56	4°05'02
	-2694 Dec 19 j 22:55	0° J		greatest brilliancy		-2688 Mar 08 j 13:45	24° Q 13'51	-1.9m
morning rise	-2693 Jan 21 j 11:38	25° J 32'38		min. Earth dist.		-2688 Mar 14 j 21:43	21° Q 57'11	0.53322 AU
	-2693 Jan 27 j 04:42	0° Z		direct		-2688 Apr 15 j 06:05	15° Q 41'27	
	-2693 Mar 07 j 05:53	0° \approx		desc. node		-2688 Jun 03 j 16:22	29° Q 02'42	
	-2693 Apr 16 j 22:41	0° H				-2688 Jun 05 j 16:19	0° M	
	-2693 May 30 j 02:43	0° Y				-2688 Jul 26 j 10:01	0° A	
	-2693 Jul 15 j 21:35	0° B				-2688 Sep 06 j 16:19	0° M	
asc. node	-2693 Aug 19 j 18:22	20° B 05'11				-2688 Oct 16 j 11:57	0° J	
	-2693 Sep 08 j 03:44	0° II				-2688 Nov 24 j 22:54	0° Z	
retrograde	-2693 Nov 11 j 19:02	18° II 48'57				-2687 Jan 04 j 05:51	0° \approx	
opposition	-2693 Dec 21 j 13:47	9° II 15'30	3°54'02			-2687 Feb 15 j 02:31	0° H	
greatest brilliancy	-2693 Dec 21 j 15:41	9° II 13'35	-1.2m	evening set		-2687 Mar 21 j 15:32	23° H 47'50	
min. Earth dist.	-2693 Dec 22 j 11:43	8° II 53'36	0.67311 AU			-2687 Mar 30 j 20:14	0° Y	
	-2692 Jan 21 j 10:58	30° R B		asc. node		-2687 Apr 10 j 14:44	7° Y 12'08	
direct	-2692 Jan 31 j 10:25	29° B 21'31						
	-2692 Feb 10 j 19:45	0° II		conjunction		-2687 May 12 j 07:05	28° Y 02'21	0°18'02
	-2692 Apr 29 j 06:50	0° S		minimum elong		-2687 May 12 j 06:21	28° Y 01'08	0°18'03
	-2692 Jun 18 j 18:53	0° Q				-2687 May 15 j 07:30	0° B	
	-2692 Aug 02 j 10:35	0° M		max. Earth dist.		-2687 May 25 j 20:53	6° B 50'11	2.64271 AU
desc. node	-2692 Aug 29 j 18:38	19° M 39'01		morning rise		-2687 Jun 29 j 06:54	28° B 53'37	
	-2692 Sep 12 j 17:29	0° A				-2687 Jul 01 j 00:37	0° II	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 22

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2687 Aug 17 j 10:35	0°☿				-2681 Mar 15 j 23:22	0°♄		
	-2687 Oct 04 j 08:29	0°♌				-2681 May 05 j 01:51	0°♊		
	-2687 Nov 22 j 08:49	0°♍				-2681 Jun 21 j 23:59	0°♍		
	-2686 Jan 14 j 02:50	0°♊		evening set		-2681 Jul 19 j 03:07	17°♍36'35		
retrograde	-2686 Apr 03 j 22:28	26°♊41'24				-2681 Aug 06 j 18:17	0°♌		
desc. node	-2686 Apr 21 j 15:43	24°♊45'25		max. Earth dist.		-2681 Aug 08 j 00:32	0°♌50'50	2.57137 AU	
opposition	-2686 May 05 j 07:54	21°♊11'42	0°-55'-47						
greatest brilliancy	-2686 May 05 j 15:33	21°♊06'08	-2.7m	conjunction		-2681 Sep 05 j 02:00	20°♌01'38	0°55'52	
min. Earth dist.	-2686 May 11 j 15:30	19°♊21'35	0.40666 AU	minimum elong		-2681 Sep 05 j 03:28	20°♌04'12	0°55'53	
direct	-2686 Jun 07 j 19:06	14°♊51'15				-2681 Sep 19 j 07:53	0°♍		
	-2686 Jul 29 j 06:30	0°♍		morning rise		-2681 Oct 25 j 00:58	25°♍41'35		
	-2686 Sep 16 j 22:19	0°♎				-2681 Oct 30 j 21:38	0°♊		
	-2686 Oct 30 j 13:52	0°♏				-2681 Dec 09 j 22:05	0°♍		
	-2686 Dec 12 j 12:53	0°♐		desc. node		-2681 Dec 12 j 15:18	2°♍04'09		
	-2685 Jan 25 j 07:19	0°♑				-2680 Jan 18 j 00:05	0°♎		
asc. node	-2685 Feb 26 j 13:15	21°♑32'36				-2680 Feb 25 j 22:28	0°♏		
	-2685 Mar 11 j 09:41	0°♑				-2680 Apr 05 j 16:37	0°♐		
	-2685 Apr 26 j 17:27	0°♑				-2680 May 17 j 14:47	0°♑		
evening set	-2685 May 03 j 21:41	4°♑35'48				-2680 Jul 03 j 08:54	0°♑		
	-2685 Jun 12 j 17:29	0°♒				-2680 Sep 15 j 03:34	0°♑		
max. Earth dist.	-2685 Jun 18 j 19:41	3°♒52'50	2.67230 AU	retrograde		-2680 Sep 24 j 04:07	0°♑32'00		
						-2680 Oct 02 j 21:37	30°♑♑		
conjunction	-2685 Jun 20 j 10:32	4°♒54'42	0°55'38	asc. node		-2680 Oct 18 j 10:23	26°♑26'20		
minimum elong	-2685 Jun 20 j 09:18	4°♒52'44	0°55'43	min. Earth dist.		-2680 Oct 29 j 15:16	22°♑19'10	0.62047 AU	
	-2685 Jul 29 j 16:28	0°♑		opposition		-2680 Nov 02 j 23:14	20°♑35'07	0°37'49	
morning rise	-2685 Aug 04 j 16:16	3°♑51'08		greatest brilliancy		-2680 Nov 02 j 19:17	20°♑39'04	-1.5m	
	-2685 Sep 14 j 00:29	0°♌		direct		-2680 Dec 11 j 00:55	11°♑38'13		
	-2685 Oct 29 j 12:27	0°♍				-2679 Feb 14 j 02:07	0°♑		
	-2685 Dec 13 j 07:35	0°♊				-2679 Apr 12 j 10:11	0°♒		
	-2684 Jan 26 j 20:33	0°♍				-2679 Jun 01 j 13:39	0°♑		
desc. node	-2684 Mar 08 j 17:06	27°♍40'08				-2679 Jul 18 j 00:04	0°♌		
	-2684 Mar 12 j 08:15	0°♎		evening set		-2679 Aug 30 j 16:15	0°♍07'03		
	-2684 May 03 j 01:11	0°♏				-2679 Aug 30 j 12:17	0°♍		
retrograde	-2684 Jun 20 j 18:12	13°♏40'29		max. Earth dist.		-2679 Sep 15 j 06:26	11°♍18'40	2.45374 AU	
min. Earth dist.	-2684 Jul 17 j 12:40	9°♏12'32	0.39554 AU			-2679 Oct 10 j 15:24	0°♊		
greatest brilliancy	-2684 Jul 21 j 17:54	7°♏58'36	-2.7m						
opposition	-2684 Jul 23 j 08:58	7°♏29'50	-6°-40'-47	conjunction		-2679 Oct 23 j 15:45	9°♊47'27	0°04'07	
direct	-2684 Aug 22 j 14:17	2°♏09'45		minimum elong		-2679 Oct 23 j 16:01	9°♊47'58	0°04'06	
	-2684 Nov 09 j 10:10	0°♐		behind sun begin		-2679 Oct 22 j 16:26	9°♊03'22		
	-2684 Dec 30 j 14:02	0°♑		behind sun end		-2679 Oct 24 j 15:36	10°♊32'38		
asc. node	-2683 Jan 13 j 11:54	8°♑31'11		desc. node		-2679 Oct 29 j 13:45	14°♊17'03		
	-2683 Feb 17 j 05:03	0°♑				-2679 Nov 19 j 01:06	0°♍		
	-2683 Apr 06 j 10:11	0°♑		morning rise		-2679 Dec 23 j 16:12	27°♍00'12		
	-2683 May 24 j 07:59	0°♒				-2679 Dec 27 j 11:54	0°♎		
evening set	-2683 Jun 10 j 12:12	10°♒51'31		greatest brilliancy		-2679 Dec 28 j 01:51	0°♎27'21	1.2m	
	-2683 Jul 10 j 10:29	0°♑				-2678 Feb 03 j 20:20	0°♏		
max. Earth dist.	-2683 Jul 11 j 19:22	0°♑53'04	2.64775 AU			-2678 Mar 14 j 23:35	0°♐		
						-2678 Apr 24 j 19:16	0°♑		
conjunction	-2683 Jul 26 j 19:06	10°♑36'41	1°10'41			-2678 Jun 07 j 08:14	0°♑		
minimum elong	-2683 Jul 26 j 19:00	10°♑36'31	1°10'46			-2678 Jul 25 j 11:17	0°♑		
	-2683 Aug 25 j 04:39	0°♌		asc. node		-2678 Sep 05 j 10:53	21°♑50'29		
morning rise	-2683 Sep 10 j 08:36	10°♌51'23				-2678 Sep 26 j 07:28	0°♒		
	-2683 Oct 08 j 08:03	0°♍		retrograde		-2678 Oct 29 j 08:39	5°♒58'06		
	-2683 Nov 19 j 21:43	0°♊				-2678 Nov 28 j 15:15	30°♑♑		
	-2683 Dec 31 j 04:24	0°♍		opposition		-2678 Dec 08 j 08:36	26°♑12'40	3°12'12	
desc. node	-2682 Jan 24 j 17:04	18°♍08'16		greatest brilliancy		-2678 Dec 08 j 04:42	26°♑16'36	-1.3m	
	-2682 Feb 09 j 15:56	0°♎		min. Earth dist.		-2678 Dec 07 j 18:28	26°♑26'52	0.67067 AU	
	-2682 Mar 22 j 04:59	0°♏		direct		-2677 Jan 17 j 16:08	16°♑29'21		
	-2682 May 03 j 11:09	0°♐				-2677 Mar 12 j 20:15	0°♒		
	-2682 Jun 21 j 08:10	0°♑				-2677 May 10 j 09:39	0°♑		
retrograde	-2682 Aug 15 j 14:47	17°♑00'04				-2677 Jun 28 j 00:11	0°♌		
min. Earth dist.	-2682 Sep 14 j 22:43	10°♑40'54	0.51433 AU			-2677 Aug 11 j 03:04	0°♍		
greatest brilliancy	-2682 Sep 21 j 08:54	8°♑16'59	-2.0m	desc. node		-2677 Sep 16 j 12:21	26°♍26'38		
opposition	-2682 Sep 22 j 12:46	7°♑50'51	-3°-11'-31			-2677 Sep 21 j 06:31	0°♊		
direct	-2682 Oct 27 j 02:08	0°♑19'28		evening set		-2677 Oct 25 j 10:02	26°♊04'53		
asc. node	-2682 Dec 01 j 10:27	7°♑06'22				-2677 Oct 30 j 11:02	0°♍		
	-2681 Jan 21 j 05:49	0°♑				-2677 Dec 07 j 15:45	0°♎		

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 23

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

conjunction	-2677 Dec 28 j 18:52	16°♂39'13	0°-59'-36		-2672 Aug 24 j 19:44	0°♄	
minimum elong	-2677 Dec 28 j 16:14	16°♂34'02	0°59'40		-2672 Oct 12 j 22:22	0°♂	
	-2676 Jan 14 j 19:34	0°♄			-2672 Dec 04 j 03:49	0°♊	
max. Earth dist.	-2676 Feb 04 j 16:20	16°♄10'07	2.38530 AU		-2671 Feb 12 j 06:48	0°♊	
	-2676 Feb 22 j 19:51	0°♊		retrograde	-2671 Mar 06 j 18:31	2°♊51'37	
morning rise	-2676 Mar 06 j 05:25	9°♊18'24			-2671 Mar 28 j 09:08	30°♊♊	
	-2676 Apr 03 j 11:07	0°♋		opposition	-2671 Apr 09 j 01:16	26°♊31'45	1°45'47
	-2676 May 16 j 08:16	0°♌		greatest brilliancy	-2671 Apr 09 j 22:59	26°♊14'08	-2.4m
	-2676 Jul 01 j 00:39	0°♍		min. Earth dist.	-2671 Apr 17 j 08:20	23°♊51'23	0.45310 AU
asc. node	-2676 Jul 23 j 09:55	13°♍53'56		desc. node	-2671 May 08 j 09:41	19°♊11'00	
	-2676 Aug 19 j 18:12	0°♎		direct	-2671 May 15 j 08:23	18°♊50'46	
	-2676 Oct 19 j 17:33	0°♏			-2671 Jun 27 j 19:41	0°♊	
retrograde	-2676 Dec 02 j 15:58	9°♏33'56			-2671 Aug 18 j 06:58	0°♋	
opposition	-2675 Jan 10 j 18:06	0°♏25'51	4°39'21		-2671 Sep 30 j 00:43	0°♋	
greatest brilliancy	-2675 Jan 11 j 08:37	0°♏11'34	-1.3m		-2671 Nov 10 j 03:15	0°♌	
	-2675 Jan 11 j 20:21	30°♋♎			-2671 Dec 21 j 14:50	0°♌	
min. Earth dist.	-2675 Jan 14 j 00:14	29°♎08'56	0.65693 AU		-2670 Feb 02 j 09:29	0°♋	
direct	-2675 Feb 21 j 00:03	20°♎24'30		asc. node	-2670 Mar 15 j 04:17	27°♋34'55	
	-2675 Apr 05 j 13:25	0°♏			-2670 Mar 18 j 19:40	0°♌	
	-2675 Jun 03 j 11:45	0°♏		evening set	-2670 Apr 17 j 23:09	19°♌47'32	
	-2675 Jul 19 j 23:34	0°♊			-2670 May 03 j 17:15	0°♍	
desc. node	-2675 Aug 03 j 10:14	10°♊04'22					
	-2675 Aug 30 j 21:07	0°♊		conjunction	-2670 Jun 05 j 17:24	21°♊10'54	0°43'24
	-2675 Oct 09 j 07:36	0°♋		minimum elong	-2670 Jun 05 j 16:06	21°♊08'50	0°43'27
	-2675 Nov 16 j 15:06	0°♋		max. Earth dist.	-2670 Jun 09 j 20:27	23°♊49'02	2.66722 AU
	-2675 Dec 24 j 22:13	0°♌			-2670 Jun 19 j 13:00	0°♎	
evening set	-2674 Jan 01 j 13:14	5°♌54'33		morning rise	-2670 Jul 21 j 15:53	20°♎28'21	
	-2674 Feb 02 j 03:21	0°♌			-2670 Aug 05 j 14:15	0°♏	
					-2670 Sep 21 j 09:09	0°♏	
conjunction	-2674 Mar 05 j 19:12	23°♏22'25	0°-51'-48		-2670 Nov 06 j 20:15	0°♊	
minimum elong	-2674 Mar 05 j 21:38	23°♏26'48	0°51'50		-2670 Dec 23 j 09:39	0°♊	
	-2674 Mar 14 j 23:47	0°♋			-2669 Feb 09 j 07:18	0°♋	
max. Earth dist.	-2674 Apr 15 j 00:32	21°♋50'20	2.51363 AU	desc. node	-2669 Mar 26 j 09:47	25°♋21'45	
	-2674 Apr 26 j 22:04	0°♌			-2669 Apr 05 j 03:01	0°♋	
morning rise	-2674 May 03 j 04:56	4°♌16'06		retrograde	-2669 May 23 j 10:47	12°♋37'46	
asc. node	-2674 Jun 10 j 08:52	29°♌33'33		min. Earth dist.	-2669 Jun 21 j 17:23	7°♋49'57	0.37633 AU
	-2674 Jun 11 j 01:10	0°♍		opposition	-2669 Jun 23 j 00:15	7°♋29'28	-5°-42'-11
	-2674 Jul 28 j 10:06	0°♎		greatest brilliancy	-2669 Jun 22 j 15:22	7°♋35'22	-2.9m
	-2674 Sep 16 j 16:34	0°♏		direct	-2669 Jul 22 j 19:22	2°♋31'14	
	-2674 Nov 13 j 07:29	0°♏			-2669 Oct 07 j 00:45	0°♌	
retrograde	-2673 Jan 12 j 07:02	16°♏05'40			-2669 Nov 25 j 02:42	0°♌	
opposition	-2673 Feb 18 j 05:50	8°♏00'30	4°42'13		-2668 Jan 10 j 18:51	0°♋	
greatest brilliancy	-2673 Feb 19 j 18:32	7°♏26'05	-1.6m	asc. node	-2668 Jan 31 j 02:58	13°♋05'28	
min. Earth dist.	-2673 Feb 25 j 03:46	5°♏25'08	0.57907 AU		-2668 Feb 26 j 12:43	0°♌	
	-2673 Mar 15 j 02:40	30°♋♏			-2668 Apr 13 j 19:11	0°♍	
direct	-2673 Mar 30 j 15:52	28°♏21'54		evening set	-2668 May 26 j 18:40	27°♋09'35	
	-2673 Apr 15 j 20:30	0°♏			-2668 May 31 j 06:16	0°♎	
desc. node	-2673 Jun 21 j 09:00	28°♏58'18		max. Earth dist.	-2668 Jul 02 j 06:52	20°♎23'19	2.66369 AU
	-2673 Jun 23 j 02:09	0°♊					
	-2673 Aug 07 j 11:49	0°♊		conjunction	-2668 Jul 12 j 05:54	26°♎46'45	1°07'58
	-2673 Sep 17 j 06:36	0°♋		minimum elong	-2668 Jul 12 j 05:14	26°♎45'39	1°08'03
	-2673 Oct 26 j 08:28	0°♋			-2668 Jul 17 j 05:58	0°♏	
	-2673 Dec 04 j 06:40	0°♌		morning rise	-2668 Aug 26 j 06:54	26°♏06'46	
	-2672 Jan 13 j 02:43	0°♌			-2668 Sep 01 j 03:54	0°♏	
	-2672 Feb 23 j 13:40	0°♋			-2668 Oct 15 j 17:14	0°♊	
evening set	-2672 Mar 02 j 04:52	5°♋22'33			-2668 Nov 27 j 22:31	0°♊	
	-2672 Apr 06 j 23:31	0°♌			-2667 Jan 09 j 02:09	0°♋	
				desc. node	-2667 Feb 10 j 09:07	23°♋17'18	
conjunction	-2672 Apr 25 j 10:55	12°♌22'54	0°-1'-5		-2667 Feb 19 j 16:11	0°♋	
minimum elong	-2672 Apr 25 j 10:57	12°♌22'57	0°01'05		-2667 Apr 02 j 19:42	0°♌	
behind sun begin	-2672 Apr 24 j 13:31	11°♌47'21			-2667 May 18 j 15:36	0°♌	
behind sun end	-2672 Apr 26 j 08:23	12°♌58'32		retrograde	-2667 Jul 27 j 10:49	25°♌34'50	
asc. node	-2672 Apr 27 j 07:12	13°♌36'24		min. Earth dist.	-2667 Aug 24 j 15:39	20°♌09'05	0.46386 AU
max. Earth dist.	-2672 May 15 j 15:45	25°♌41'53	2.61637 AU	greatest brilliancy	-2667 Aug 31 j 00:16	17°♌56'28	-2.3m
	-2672 May 22 j 05:57	0°♍		opposition	-2667 Sep 01 j 18:54	17°♌19'08	-4°-54'-50
morning rise	-2672 Jun 14 j 10:57	14°♍59'45		direct	-2667 Oct 04 j 13:49	10°♌36'51	
	-2672 Jul 07 j 23:43	0°♎			-2667 Dec 08 j 05:29	0°♋	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 24

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

asc. node	-2667 Dec 18 j 02:42	4° Υ 55'14			-2662 Dec 15 j 03:44	0° Υ	
	-2666 Feb 01 j 18:12	0° Υ			-2661 Jan 22 j 08:25	0° Υ	
	-2666 Mar 24 j 10:47	0° Υ		morning rise	-2661 Feb 07 j 03:28	12° Υ 15'25	
	-2666 May 12 j 10:53	0° Υ			-2661 Mar 02 j 08:43	0° Υ	
	-2666 Jun 28 j 23:12	0° Υ			-2661 Apr 11 j 23:54	0° Υ	
evening set	-2666 Jul 03 j 20:13	3° Υ 08'29			-2661 May 24 j 23:38	0° Υ	
max. Earth dist.	-2666 Jul 27 j 20:28	18° Υ 48'27	2.60711 AU		-2661 Jul 10 j 05:00	0° Υ	
	-2666 Aug 13 j 16:19	0° Υ		asc. node	-2661 Aug 10 j 01:36	18° Υ 25'56	
					-2661 Aug 31 j 03:15	0° Υ	
conjunction	-2666 Aug 19 j 17:58	4° Υ 04'54	1°05'42	retrograde	-2661 Nov 19 j 15:06	26° Υ 36'25	
minimum elong	-2666 Aug 19 j 18:54	4° Υ 06'29	1°05'45	opposition	-2661 Dec 29 j 04:50	17° Υ 11'00	4°13'38
	-2666 Sep 26 j 10:14	0° Υ		greatest brilliancy	-2661 Dec 29 j 10:49	17° Υ 05'03	-1.2m
morning rise	-2666 Oct 06 j 08:27	6° Υ 59'53		min. Earth dist.	-2661 Dec 30 j 22:33	16° Υ 29'30	0.67021 AU
	-2666 Nov 07 j 07:37	0° Υ		direct	-2660 Feb 08 j 06:10	7° Υ 13'02	
	-2666 Dec 17 j 17:31	0° Υ			-2660 Apr 21 j 15:33	0° Υ	
desc. node	-2666 Dec 29 j 08:26	8° Υ 46'49			-2660 Jun 13 j 02:47	0° Υ	
	-2665 Jan 26 j 05:16	0° Υ			-2660 Jul 28 j 07:54	0° Υ	
	-2665 Mar 06 j 13:34	0° Υ		desc. node	-2660 Aug 20 j 04:07	16° Υ 15'51	
	-2665 Apr 15 j 20:44	0° Υ			-2660 Sep 07 j 19:28	0° Υ	
	-2665 May 28 j 22:21	0° Υ			-2660 Oct 17 j 02:03	0° Υ	
	-2665 Jul 19 j 03:08	0° Υ			-2660 Nov 24 j 07:09	0° Υ	
retrograde	-2665 Sep 10 j 10:43	15° Υ 13'35		evening set	-2660 Dec 05 j 04:51	8° Υ 35'54	
min. Earth dist.	-2665 Oct 14 j 01:21	7° Υ 39'56	0.58476 AU		-2659 Jan 01 j 11:39	0° Υ	
opposition	-2665 Oct 19 j 18:39	5° Υ 24'24	0°-41'-59				
greatest brilliancy	-2665 Oct 19 j 13:35	5° Υ 29'25	-1.7m	conjunction	-2659 Feb 09 j 02:48	29° Υ 39'37	-1°-4'-22
	-2665 Nov 04 j 03:39	30° Υ		minimum elong	-2659 Feb 09 j 04:20	29° Υ 42'31	1°04'26
asc. node	-2665 Nov 05 j 01:45	29° Υ 44'41			-2659 Feb 09 j 13:37	0° Υ	
direct	-2665 Nov 25 j 14:48	26° Υ 55'02			-2659 Mar 22 j 06:39	0° Υ	
	-2665 Dec 18 j 23:26	0° Υ		max. Earth dist.	-2659 Mar 28 j 16:23	4° Υ 35'21	2.46258 AU
	-2664 Feb 27 j 18:45	0° Υ		morning rise	-2659 Apr 13 j 00:42	15° Υ 26'03	
	-2664 Apr 21 j 00:26	0° Υ			-2659 May 04 j 02:39	0° Υ	
	-2664 Jun 09 j 00:56	0° Υ			-2659 Jun 18 j 07:48	0° Υ	
	-2664 Jul 25 j 03:03	0° Υ		asc. node	-2659 Jun 26 j 23:53	5° Υ 34'00	
evening set	-2664 Aug 12 j 18:09	12° Υ 38'34			-2659 Aug 05 j 06:20	0° Υ	
max. Earth dist.	-2664 Aug 28 j 07:53	23° Υ 26'50	2.50322 AU		-2659 Sep 26 j 14:39	0° Υ	
	-2664 Sep 06 j 14:58	0° Υ			-2659 Dec 10 j 22:17	0° Υ	
				retrograde	-2659 Dec 26 j 10:45	1° Υ 22'42	
conjunction	-2664 Oct 02 j 16:55	18° Υ 47'27	0°28'35		-2658 Jan 10 j 03:06	30° Υ	
minimum elong	-2664 Oct 02 j 18:20	18° Υ 50'02	0°28'34	opposition	-2658 Feb 02 j 09:48	22° Υ 48'52	4°54'09
	-2664 Oct 17 j 21:30	0° Υ		greatest brilliancy	-2658 Feb 03 j 14:37	22° Υ 21'10	-1.5m
desc. node	-2664 Nov 15 j 06:47	21° Υ 24'05		min. Earth dist.	-2658 Feb 07 j 22:43	20° Υ 41'10	0.61712 AU
	-2664 Nov 26 j 12:09	0° Υ		direct	-2658 Mar 15 j 10:05	12° Υ 54'15	
morning rise	-2664 Nov 27 j 12:56	0° Υ 47'41			-2658 May 13 j 20:25	0° Υ	
	-2663 Jan 04 j 03:48	0° Υ			-2658 Jul 04 j 15:54	0° Υ	
	-2663 Feb 11 j 16:07	0° Υ		desc. node	-2658 Jul 08 j 02:51	2° Υ 15'44	
	-2663 Mar 22 j 22:48	0° Υ			-2658 Aug 17 j 00:32	0° Υ	
	-2663 May 02 j 23:58	0° Υ			-2658 Sep 26 j 01:21	0° Υ	
	-2663 Jun 16 j 04:39	0° Υ			-2658 Nov 03 j 17:01	0° Υ	
	-2663 Aug 05 j 21:38	0° Υ			-2658 Dec 12 j 06:49	0° Υ	
asc. node	-2663 Sep 22 j 01:19	19° Υ 31'20			-2657 Jan 20 j 18:51	0° Υ	
retrograde	-2663 Oct 15 j 22:58	22° Υ 52'08		evening set	-2657 Feb 09 j 12:53	14° Υ 34'39	
min. Earth dist.	-2663 Nov 22 j 22:25	13° Υ 48'29	0.65849 AU		-2657 Mar 02 j 22:08	0° Υ	
opposition	-2663 Nov 25 j 00:20	12° Υ 58'13	2°20'42				
greatest brilliancy	-2663 Nov 24 j 17:15	13° Υ 05'22	-1.3m	conjunction	-2657 Apr 08 j 01:41	25° Υ 13'51	0°-21'-28
direct	-2662 Jan 03 j 14:22	3° Υ 29'32		minimum elong	-2657 Apr 08 j 02:49	25° Υ 15'46	0°21'27
	-2662 Mar 26 j 15:46	0° Υ			-2657 Apr 15 j 01:39	0° Υ	
	-2662 May 19 j 06:37	0° Υ		max. Earth dist.	-2657 May 05 j 17:04	13° Υ 52'37	2.58185 AU
	-2662 Jul 05 j 18:10	0° Υ		asc. node	-2657 May 14 j 22:00	19° Υ 58'33	
	-2662 Aug 18 j 13:19	0° Υ		morning rise	-2657 May 30 j 18:34	0° Υ 22'15	
	-2662 Sep 28 j 15:34	0° Υ			-2657 May 30 j 04:54	0° Υ	
evening set	-2662 Oct 01 j 18:03	2° Υ 19'48			-2657 Jul 16 j 01:37	0° Υ	
desc. node	-2662 Oct 03 j 04:50	3° Υ 25'15			-2657 Sep 02 j 12:45	0° Υ	
max. Earth dist.	-2662 Nov 05 j 23:31	29° Υ 17'33	2.38358 AU		-2657 Oct 23 j 11:53	0° Υ	
	-2662 Nov 06 j 21:22	0° Υ			-2657 Dec 21 j 17:47	0° Υ	
				retrograde	-2656 Feb 12 j 02:56	12° Υ 54'21	
conjunction	-2662 Dec 01 j 03:03	18° Υ 57'28	0°-38'-58	opposition	-2656 Mar 18 j 00:29	5° Υ 47'07	3°27'39
minimum elong	-2662 Dec 01 j 00:15	18° Υ 51'59	0°39'01	greatest brilliancy	-2656 Mar 19 j 13:57	5° Υ 14'14	-2.0m

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 25

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

min. Earth dist.	-2656 Mar 26 j 09:15	2° \mathbb{M} 51'58	0.50522 AU	evening set	-2651 Jun 18 j 22:53	19° \mathbb{I} 10'21	
	-2656 Apr 04 j 16:21	30° \mathbb{R} Ω			-2651 Jul 05 j 20:25	0° \mathfrak{S}	
direct	-2656 Apr 25 j 11:13	27° Ω 03'42		max. Earth dist.	-2651 Jul 17 j 11:47	7° \mathfrak{S} 31'55	2.63532 AU
	-2656 May 16 j 23:14	0° \mathbb{M}					
desc. node	-2656 May 25 j 01:25	2° \mathbb{M} 26'05		conjunction	-2651 Aug 04 j 08:13	19° \mathfrak{S} 12'54	1°10'14
	-2656 Jul 18 j 03:37	0° $\underline{\mathfrak{A}}$		minimum elong	-2651 Aug 04 j 08:30	19° \mathfrak{S} 13'21	1°10'19
	-2656 Aug 31 j 01:38	0° \mathbb{M}			-2651 Aug 20 j 14:10	0° Ω	
	-2656 Oct 10 j 14:11	0° \mathfrak{X}		morning rise	-2651 Sep 19 j 10:48	20° Ω 13'45	
	-2656 Nov 19 j 11:21	0° \mathfrak{Z}			-2651 Oct 03 j 14:04	0° \mathbb{M}	
	-2656 Dec 30 j 01:56	0° \approx			-2651 Nov 14 j 21:30	0° $\underline{\mathfrak{A}}$	
	-2655 Feb 10 j 04:25	0° \mathfrak{H}			-2651 Dec 25 j 19:58	0° \mathbb{M}	
	-2655 Mar 26 j 02:21	0° \mathbb{Y}		desc. node	-2650 Jan 15 j 00:51	15° \mathbb{M} 04'36	
evening set	-2655 Mar 31 j 22:42	3° \mathbb{Y} 54'21			-2650 Feb 03 j 21:41	0° \mathfrak{X}	
asc. node	-2655 Mar 31 j 20:53	3° \mathbb{Y} 51'20			-2650 Mar 15 j 21:42	0° \mathfrak{Z}	
	-2655 May 10 j 16:01	0° \mathfrak{B}			-2650 Apr 26 j 04:34	0° \approx	
					-2650 Jun 10 j 18:16	0° \mathfrak{H}	
conjunction	-2655 May 21 j 10:20	6° \mathfrak{B} 57'44	0°28'07	retrograde	-2650 Aug 25 j 11:12	28° \mathfrak{H} 08'42	
minimum elong	-2655 May 21 j 09:18	6° \mathfrak{B} 56'04	0°28'09	min. Earth dist.	-2650 Sep 26 j 00:31	21° \mathfrak{H} 20'54	0.54108 AU
max. Earth dist.	-2655 May 31 j 13:06	13° \mathfrak{B} 28'26	2.65362 AU	opposition	-2650 Oct 02 j 23:59	18° \mathfrak{H} 40'17	-2°-14'-7
	-2655 Jun 26 j 09:09	0° \mathbb{I}		greatest brilliancy	-2650 Oct 02 j 05:16	18° \mathfrak{H} 58'17	-1.9m
morning rise	-2655 Jul 07 j 13:13	7° \mathbb{I} 06'42		direct	-2650 Nov 07 j 09:43	10° \mathfrak{H} 45'54	
	-2655 Aug 12 j 14:58	0° \mathfrak{S}		asc. node	-2650 Nov 21 j 17:14	12° \mathfrak{H} 00'46	
	-2655 Sep 29 j 01:23	0° Ω			-2649 Jan 12 j 04:49	0° \mathbb{Y}	
	-2655 Nov 15 j 22:28	0° \mathbb{M}			-2649 Mar 09 j 23:57	0° \mathfrak{B}	
	-2654 Jan 04 j 13:24	0° $\underline{\mathfrak{A}}$			-2649 Apr 30 j 00:10	0° \mathbb{I}	
	-2654 Mar 02 j 19:16	0° \mathbb{M}			-2649 Jun 17 j 06:50	0° \mathfrak{S}	
desc. node	-2654 Apr 12 j 01:56	11° \mathbb{M} 55'18		evening set	-2649 Jul 28 j 03:15	26° \mathfrak{S} 37'50	
retrograde	-2654 Apr 21 j 08:44	12° \mathbb{M} 27'25			-2649 Aug 02 j 04:05	0° Ω	
opposition	-2654 May 22 j 00:47	7° \mathbb{M} 18'33	-2°-47'-24	max. Earth dist.	-2649 Aug 15 j 03:18	8° Ω 46'09	2.54875 AU
greatest brilliancy	-2654 May 22 j 13:19	7° \mathbb{M} 09'53	-2.8m				
min. Earth dist.	-2654 May 26 j 02:19	6° \mathbb{M} 11'11	0.38802 AU	conjunction	-2649 Sep 14 j 22:50	0° \mathbb{M} 09'34	0°47'37
direct	-2654 Jun 22 j 20:48	1° \mathbb{M} 40'06		minimum elong	-2649 Sep 15 j 00:28	0° \mathbb{M} 12'28	0°47'38
	-2654 Sep 06 j 08:34	0° \mathfrak{X}			-2649 Sep 14 j 17:25	0° \mathbb{M}	
	-2654 Oct 23 j 00:54	0° \mathfrak{Z}			-2649 Oct 26 j 04:38	0° $\underline{\mathfrak{A}}$	
	-2654 Dec 06 j 07:34	0° \approx		morning rise	-2649 Nov 05 j 16:20	7° $\underline{\mathfrak{A}}$ 47'39	
	-2653 Jan 19 j 20:06	0° \mathfrak{H}		desc. node	-2649 Dec 03 j 00:35	28° $\underline{\mathfrak{A}}$ 26'59	
asc. node	-2653 Feb 16 j 19:06	18° \mathfrak{H} 30'04			-2649 Dec 05 j 01:20	0° \mathbb{M}	
	-2653 Mar 06 j 09:28	0° \mathbb{Y}			-2648 Jan 12 j 23:07	0° \mathfrak{X}	
	-2653 Apr 21 j 23:44	0° \mathfrak{B}			-2648 Feb 20 j 16:54	0° \mathfrak{Z}	
evening set	-2653 May 12 j 17:34	13° \mathfrak{B} 13'03			-2648 Mar 31 j 05:22	0° \approx	
	-2653 Jun 08 j 02:57	0° \mathbb{I}			-2648 May 11 j 16:52	0° \mathfrak{H}	
max. Earth dist.	-2653 Jun 24 j 03:36	10° \mathbb{I} 12'24	2.67144 AU		-2648 Jun 26 j 03:07	0° \mathbb{Y}	
					-2648 Aug 22 j 06:57	0° \mathfrak{B}	
conjunction	-2653 Jun 28 j 18:49	13° \mathbb{I} 09'43	1°01'14	retrograde	-2648 Oct 02 j 06:37	9° \mathfrak{B} 11'35	
minimum elong	-2653 Jun 28 j 17:44	13° \mathbb{I} 07'59	1°01'18	asc. node	-2648 Oct 08 j 16:39	8° \mathfrak{B} 54'32	
	-2653 Jul 25 j 01:40	0° \mathfrak{S}		min. Earth dist.	-2648 Nov 07 j 16:15	0° \mathfrak{B} 39'22	0.63673 AU
morning rise	-2653 Aug 12 j 19:48	12° \mathfrak{S} 06'43			-2648 Nov 09 j 07:29	30° \mathbb{R} \mathbb{Y}	
	-2653 Sep 09 j 05:40	0° Ω		opposition	-2648 Nov 11 j 05:16	29° \mathbb{Y} 13'55	1°18'50
	-2653 Oct 24 j 08:39	0° \mathbb{M}		greatest brilliancy	-2648 Nov 10 j 22:41	29° \mathbb{Y} 20'33	-1.4m
	-2653 Dec 07 j 12:02	0° $\underline{\mathfrak{A}}$		direct	-2648 Dec 19 j 21:03	20° \mathbb{Y} 04'23	
	-2652 Jan 19 j 23:34	0° \mathbb{M}			-2647 Feb 03 j 02:30	0° \mathfrak{B}	
desc. node	-2652 Feb 28 j 02:23	26° \mathbb{M} 58'55			-2647 Apr 06 j 06:55	0° \mathbb{I}	
	-2652 Mar 03 j 12:33	0° \mathfrak{X}			-2647 May 27 j 10:28	0° \mathfrak{S}	
	-2652 Apr 18 j 09:58	0° \mathfrak{Z}			-2647 Jul 13 j 05:19	0° Ω	
	-2652 Jun 29 j 15:59	0° \approx			-2647 Aug 25 j 20:27	0° \mathbb{M}	
retrograde	-2652 Jul 05 j 02:38	0° \approx 12'44		evening set	-2647 Sep 10 j 14:14	11° \mathbb{M} 17'37	
	-2652 Jul 10 j 13:22	30° \mathbb{R} \mathfrak{Z}		max. Earth dist.	-2647 Sep 28 j 10:59	24° \mathbb{M} 23'33	2.42660 AU
min. Earth dist.	-2652 Jul 31 j 21:27	25° \mathfrak{Z} 32'31	0.41632 AU		-2647 Oct 05 j 23:42	0° $\underline{\mathfrak{A}}$	
greatest brilliancy	-2652 Aug 06 j 06:05	23° \mathfrak{Z} 51'53	-2.6m	desc. node	-2647 Oct 19 j 23:34	10° $\underline{\mathfrak{A}}$ 32'33	
opposition	-2652 Aug 08 j 04:51	23° \mathfrak{Z} 15'02	-6°-20'-13				
direct	-2652 Sep 08 j 02:59	17° \mathfrak{Z} 27'54		conjunction	-2647 Nov 05 j 15:24	23° $\underline{\mathfrak{A}}$ 16'52	0°-11'-32
	-2652 Oct 27 j 03:01	0° \approx		minimum elong	-2647 Nov 05 j 14:35	23° $\underline{\mathfrak{A}}$ 15'16	0°11'33
	-2652 Dec 23 j 04:55	0° \mathfrak{H}		behind sun begin	-2647 Nov 04 j 20:24	22° $\underline{\mathfrak{A}}$ 40'18	
asc. node	-2651 Jan 03 j 17:52	6° \mathfrak{H} 45'02		behind sun end	-2647 Nov 06 j 08:45	23° $\underline{\mathfrak{A}}$ 50'16	
	-2651 Feb 11 j 10:50	0° \mathbb{Y}			-2647 Nov 14 j 08:12	0° \mathbb{M}	
	-2651 Apr 01 j 08:50	0° \mathfrak{B}			-2647 Dec 22 j 17:17	0° \mathfrak{X}	
	-2651 May 19 j 14:48	0° \mathbb{I}		morning rise	-2646 Jan 08 j 15:27	13° \mathfrak{X} 17'55	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 26

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2646 Jan 29 j 23:42	0°☾		direct	-2641 Apr 08 j 21:53	8°♌23'32	
	-2646 Mar 10 j 00:46	0°♊		desc. node	-2641 Jun 11 j 18:51	28°♌46'37	
	-2646 Apr 19 j 17:16	0°♈			-2641 Jun 14 j 00:58	0°♍	
	-2646 Jun 01 j 22:38	0°♊			-2641 Jul 31 j 21:47	0°♌	
	-2646 Jul 19 j 02:29	0°♏			-2641 Sep 11 j 10:46	0°♍	
asc. node	-2646 Aug 26 j 16:00	21°♏30'20			-2641 Oct 20 j 21:45	0°♎	
	-2646 Sep 13 j 12:58	0°♏			-2641 Nov 29 j 01:51	0°☾	
retrograde	-2646 Nov 06 j 02:18	13°♏49'07			-2640 Jan 08 j 02:33	0°♊	
opposition	-2646 Dec 15 j 23:23	4°♏09'44	3°37'43		-2640 Feb 18 j 17:27	0°♈	
greatest brilliancy	-2646 Dec 15 j 22:23	4°♏10'44	-1.2m	evening set	-2640 Mar 13 j 11:52	16°♈32'38	
min. Earth dist.	-2646 Dec 16 j 04:48	4°♏04'19	0.67334 AU		-2640 Apr 02 j 06:10	0°♊	
	-2646 Dec 26 j 17:52	30°♏♏		asc. node	-2640 Apr 17 j 12:39	10°♊13'36	
direct	-2645 Jan 25 j 14:26	24°♏20'04					
	-2645 Feb 27 j 13:43	0°♏		conjunction	-2640 May 05 j 05:38	21°♊55'33	0°10'14
	-2645 May 04 j 00:37	0°♏		minimum elong	-2640 May 05 j 05:10	21°♊54'48	0°10'16
	-2645 Jun 22 j 17:09	0°♌		behind sun begin	-2640 May 04 j 12:58	21°♊28'15	
	-2645 Aug 06 j 04:41	0°♍		behind sun end	-2640 May 05 j 21:22	22°♊21'21	
desc. node	-2645 Sep 06 j 21:15	22°♍52'24			-2640 May 17 j 14:11	0°♏	
	-2645 Sep 16 j 11:07	0°♌		max. Earth dist.	-2640 May 21 j 15:18	2°♏37'50	2.63193 AU
	-2645 Oct 25 j 16:31	0°♍		morning rise	-2640 Jun 23 j 01:06	23°♏28'54	
evening set	-2645 Nov 08 j 21:56	11°♍07'09			-2640 Jul 03 j 06:42	0°♏	
	-2645 Dec 02 j 21:24	0°♎			-2640 Aug 19 j 20:07	0°♏	
	-2644 Jan 10 j 01:03	0°☾			-2640 Oct 07 j 04:52	0°♌	
					-2640 Nov 26 j 08:11	0°♍	
conjunction	-2644 Jan 13 j 16:22	2°☾50'11	-1°-5'-31		-2639 Jan 21 j 22:52	0°♌	
minimum elong	-2644 Jan 13 j 15:09	2°☾47'48	1°05'36	retrograde	-2639 Mar 22 j 02:47	16°♌14'01	
	-2644 Feb 18 j 01:11	0°♊		opposition	-2639 Apr 23 j 07:55	10°♌22'37	0°21'04
max. Earth dist.	-2644 Mar 02 j 13:37	10°♊08'29	2.41000 AU	greatest brilliancy	-2639 Apr 23 j 12:13	10°♌19'20	-2.5m
morning rise	-2644 Mar 20 j 18:28	23°♊33'08		desc. node	-2639 Apr 28 j 18:04	8°♌42'57	
	-2644 Mar 29 j 16:00	0°♈		min. Earth dist.	-2639 Apr 30 j 20:09	8°♌05'18	0.42602 AU
	-2644 May 11 j 11:04	0°♊		direct	-2639 May 28 j 03:30	3°♌25'08	
	-2644 Jun 25 j 21:02	0°♏			-2639 Aug 08 j 00:07	0°♍	
asc. node	-2644 Jul 13 j 15:59	11°♏13'25			-2639 Sep 22 j 12:30	0°♎	
	-2644 Aug 13 j 17:22	0°♏			-2639 Nov 03 j 19:18	0°☾	
	-2644 Oct 08 j 23:17	0°♏			-2639 Dec 15 j 23:26	0°♊	
retrograde	-2644 Dec 11 j 01:03	17°♏37'14			-2638 Jan 28 j 05:16	0°♈	
opposition	-2643 Jan 18 j 18:37	8°♏40'04	4°48'40	asc. node	-2638 Mar 05 j 11:07	24°♈23'10	
greatest brilliancy	-2643 Jan 19 j 14:12	8°♏20'54	-1.3m		-2638 Mar 13 j 22:44	0°♊	
min. Earth dist.	-2643 Jan 22 j 20:13	7°♏04'36	0.64550 AU	evening set	-2638 Apr 27 j 04:13	28°♊47'58	
	-2643 Feb 14 j 16:41	30°♏♏			-2638 Apr 29 j 00:58	0°♏	
direct	-2643 Mar 01 j 00:23	28°♏39'04					
	-2643 Mar 16 j 01:54	0°♏		conjunction	-2638 Jun 14 j 04:54	29°♏31'46	0°50'54
	-2643 May 27 j 12:29	0°♌		minimum elong	-2638 Jun 14 j 03:37	29°♏29'43	0°50'57
	-2643 Jul 14 j 08:04	0°♍			-2638 Jun 14 j 22:37	0°♏	
desc. node	-2643 Jul 24 j 19:27	7°♍10'26		max. Earth dist.	-2638 Jun 15 j 04:45	0°♏09'47	2.67106 AU
	-2643 Aug 25 j 15:54	0°♌		morning rise	-2638 Jun 29 j 16:39	28°♏33'51	
	-2643 Oct 04 j 06:39	0°♍			-2638 Jul 31 j 22:27	0°♏	
	-2643 Nov 11 j 16:29	0°♎			-2638 Sep 16 j 11:22	0°♌	
	-2643 Dec 20 j 01:12	0°☾			-2638 Nov 01 j 08:58	0°♍	
evening set	-2642 Jan 16 j 07:18	20°☾55'35			-2638 Dec 16 j 20:35	0°♌	
	-2642 Jan 28 j 07:53	0°♊			-2637 Jan 31 j 13:55	0°♍	
	-2642 Mar 10 j 05:48	0°♈		desc. node	-2637 Mar 16 j 18:49	27°♍46'30	
					-2637 Mar 20 j 12:47	0°♎	
conjunction	-2642 Mar 18 j 12:58	5°♈54'51	0°-41'-34		-2637 May 29 j 22:52	0°☾	
minimum elong	-2642 Mar 18 j 15:08	5°♈58'41	0°41'36	retrograde	-2637 Jun 09 j 13:51	0°☾45'32	
	-2642 Apr 22 j 04:44	0°♊			-2637 Jun 20 j 03:25	30°♏♏	
max. Earth dist.	-2642 Apr 23 j 04:46	0°♊40'55	2.53980 AU	min. Earth dist.	-2637 Jul 07 j 00:01	26°♎16'48	0.38343 AU
morning rise	-2642 May 13 j 16:43	14°♊28'51		greatest brilliancy	-2637 Jul 09 j 22:32	25°♎27'56	-2.8m
asc. node	-2642 May 31 j 14:50	26°♊18'31		opposition	-2637 Jul 11 j 01:46	25°♎08'57	-6°-32'-49
	-2642 Jun 06 j 06:35	0°♏		direct	-2637 Aug 09 j 22:14	20°♎04'53	
	-2642 Jul 23 j 09:04	0°♏			-2637 Sep 20 j 22:07	0°☾	
	-2642 Sep 10 j 19:08	0°♏			-2637 Nov 16 j 17:49	0°♊	
	-2642 Nov 03 j 23:43	0°♌			-2636 Jan 04 j 11:40	0°♈	
retrograde	-2641 Jan 22 j 17:55	25°♌34'29		asc. node	-2636 Jan 21 j 09:32	10°♈37'48	
opposition	-2641 Feb 28 j 00:51	17°♌47'37	4°24'03		-2636 Feb 21 j 03:47	0°♊	
greatest brilliancy	-2641 Mar 01 j 15:54	17°♌11'38	-1.8m		-2636 Apr 08 j 21:49	0°♏	
min. Earth dist.	-2641 Mar 07 j 13:52	15°♌01'22	0.55474 AU		-2636 May 26 j 14:39	0°♏	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 27

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

evening set	-2636 Jun 04 j 05:44	5° Π 27'28			-2631 Feb 06 j 17:01	0° Θ	
max. Earth dist.	-2636 Jul 07 j 17:55	26° Π 49'40	2.65594 AU		-2631 Mar 17 j 20:49	0° \approx	
	-2636 Jul 12 j 16:11	0° Θ			-2631 Apr 27 j 17:22	0° H	
					-2631 Jun 10 j 09:58	0° Υ	
conjunction	-2636 Jul 20 j 13:13	5° Θ 05'18	1°10'02		-2631 Jul 29 j 06:50	0° X	
minimum elong	-2636 Jul 20 j 12:51	5° Θ 04'43	1°10'07	asc. node	-2631 Sep 12 j 08:02	21° X 53'10	
	-2636 Aug 27 j 12:44	0° Ω			-2631 Oct 11 j 16:43	0° Π	
morning rise	-2636 Sep 03 j 19:12	4° Ω 50'49		retrograde	-2631 Oct 23 j 16:52	0° Π 53'09	
	-2636 Oct 10 j 21:09	0° m			-2631 Nov 04 j 03:51	30° R X	
	-2636 Nov 22 j 18:08	0° $\underline{\text{A}}$		min. Earth dist.	-2631 Dec 01 j 11:03	21° X 34'05	0.66641 AU
	-2635 Jan 03 j 09:46	0° M		opposition	-2631 Dec 02 j 17:35	21° X 03'21	2°51'59
desc. node	-2635 Jan 31 j 19:08	20° M 47'21		greatest brilliancy	-2631 Dec 02 j 11:47	21° X 09'11	-1.3m
	-2635 Feb 13 j 07:51	0° X		direct	-2630 Jan 11 j 17:34	11° X 26'15	
	-2635 Mar 26 j 10:04	0° Θ			-2630 Mar 18 j 09:12	0° Π	
	-2635 May 08 j 17:29	0° \approx			-2630 May 13 j 13:33	0° Θ	
	-2635 Jul 01 j 11:35	0° H			-2630 Jun 30 j 17:31	0° Ω	
retrograde	-2635 Aug 07 j 17:17	8° H 36'18			-2630 Aug 13 j 18:28	0° m	
min. Earth dist.	-2635 Sep 06 j 01:43	2° H 40'32	0.49182 AU	desc. node	-2630 Sep 23 j 14:26	29° m 44'46	
opposition	-2635 Sep 13 j 23:43	29° \approx 47'39	-3°-56'00		-2630 Sep 23 j 22:34	0° $\underline{\text{A}}$	
greatest brilliancy	-2635 Sep 12 j 12:58	0° H 19'27	-2.1m	evening set	-2630 Oct 14 j 18:40	15° $\underline{\text{A}}$ 47'30	
	-2635 Sep 13 j 10:12	30° R \approx			-2630 Nov 02 j 04:15	0° M	
direct	-2635 Oct 17 j 18:50	22° \approx 37'00			-2630 Dec 10 j 09:50	0° X	
	-2635 Nov 23 j 15:42	0° H					
asc. node	-2635 Dec 08 j 07:51	5° H 47'15		conjunction	-2630 Dec 16 j 12:16	4° X 48'41	0°-51'-59
	-2634 Jan 25 j 16:30	0° Υ		minimum elong	-2630 Dec 16 j 09:11	4° X 42'36	0°52'03
	-2634 Mar 18 j 22:32	0° X		max. Earth dist.	-2630 Dec 24 j 11:37	11° X 05'52	2.37455 AU
	-2634 May 07 j 13:12	0° Π			-2629 Jan 17 j 13:35	0° Θ	
	-2634 Jun 24 j 07:30	0° Θ		morning rise	-2629 Feb 23 j 06:48	28° Θ 17'37	
evening set	-2634 Jul 12 j 12:30	11° Θ 46'08			-2629 Feb 25 j 12:52	0° \approx	
max. Earth dist.	-2634 Aug 03 j 05:10	26° Θ 04'04	2.58833 AU		-2629 Apr 07 j 02:48	0° H	
	-2634 Aug 09 j 02:18	0° Ω			-2629 May 19 j 23:09	0° Υ	
					-2629 Jul 04 j 18:33	0° X	
conjunction	-2634 Aug 28 j 22:12	13° Ω 26'24	1°00'41	asc. node	-2629 Jul 31 j 07:20	16° X 16'01	
minimum elong	-2634 Aug 28 j 23:28	13° Ω 28'34	1°00'44		-2629 Aug 24 j 03:51	0° Π	
	-2634 Sep 21 j 18:49	0° m			-2629 Oct 29 j 22:38	0° Θ	
morning rise	-2634 Oct 16 j 16:48	17° m 45'00		retrograde	-2629 Nov 27 j 15:39	4° Θ 27'58	
	-2634 Nov 02 j 12:53	0° $\underline{\text{A}}$			-2629 Dec 23 j 23:13	30° R Π	
	-2634 Dec 12 j 18:00	0° M		opposition	-2628 Jan 05 j 22:48	25° Π 11'40	4°29'47
desc. node	-2634 Dec 19 j 17:36	5° M 17'46		greatest brilliancy	-2628 Jan 06 j 09:21	25° Π 01'13	-1.3m
	-2633 Jan 21 j 00:29	0° X		min. Earth dist.	-2628 Jan 08 j 12:16	24° Π 10'48	0.66409 AU
	-2633 Mar 01 j 02:38	0° Θ		direct	-2628 Feb 16 j 02:50	15° Π 11'18	
	-2633 Apr 10 j 00:47	0° \approx			-2628 Apr 12 j 10:21	0° Θ	
	-2633 May 22 j 06:59	0° H			-2628 Jun 07 j 01:48	0° Ω	
	-2633 Jul 09 j 06:05	0° Υ			-2628 Jul 23 j 00:57	0° m	
retrograde	-2633 Sep 19 j 00:27	24° Υ 35'34		desc. node	-2628 Aug 10 j 12:25	12° m 59'51	
min. Earth dist.	-2633 Oct 23 j 16:00	16° Υ 39'42	0.60546 AU		-2628 Sep 02 j 19:15	0° $\underline{\text{A}}$	
asc. node	-2633 Oct 26 j 07:26	15° Υ 36'37			-2628 Oct 12 j 04:38	0° M	
opposition	-2633 Oct 28 j 15:22	14° Υ 40'44	0°05'50	greatest brilliancy	-2628 Oct 20 j 12:06	6° M 28'10	1.2m
greatest brilliancy	-2633 Nov 25 j 00:31	6° Υ 36'26	-1.8m		-2628 Nov 19 j 11:16	0° X	
direct	-2633 Dec 05 j 04:08	5° Υ 55'33		evening set	-2628 Dec 20 j 17:33	24° X 33'51	
	-2632 Feb 20 j 01:34	0° X			-2628 Dec 27 j 16:46	0° Θ	
	-2632 Apr 15 j 10:22	0° Π			-2627 Feb 04 j 19:27	0° \approx	
	-2632 Jun 04 j 02:35	0° Θ					
	-2632 Jul 20 j 10:37	0° Ω		conjunction	-2627 Feb 23 j 09:58	13° \approx 52'31	0°-58'-13
evening set	-2632 Aug 22 j 18:08	22° Ω 47'11		minimum elong	-2627 Feb 23 j 12:16	13° \approx 56'46	0°58'16
	-2632 Sep 01 j 23:56	0° m			-2627 Mar 17 j 13:06	0° H	
max. Earth dist.	-2632 Sep 06 j 22:19	3° m 30'29	2.47618 AU	max. Earth dist.	-2627 Apr 08 j 06:34	15° H 25'06	2.49120 AU
	-2632 Oct 13 j 05:33	0° $\underline{\text{A}}$		morning rise	-2627 Apr 24 j 19:11	26° H 52'28	
					-2627 Apr 29 j 08:45	0° Υ	
conjunction	-2632 Oct 14 j 06:04	0° $\underline{\text{A}}$ 45'40	0°15'11		-2627 Jun 13 j 11:09	0° X	
minimum elong	-2632 Oct 14 j 06:56	0° $\underline{\text{A}}$ 47'19	0°15'10	asc. node	-2627 Jun 17 j 06:04	2° X 27'05	
behind sun begin	-2632 Oct 13 j 22:13	0° $\underline{\text{A}}$ 31'04			-2627 Jul 30 j 23:43	0° Π	
behind sun end	-2632 Oct 14 j 15:40	1° $\underline{\text{A}}$ 03'35			-2627 Sep 19 j 22:20	0° Θ	
desc. node	-2632 Nov 05 j 15:58	17° $\underline{\text{A}}$ 39'56			-2627 Nov 20 j 05:49	0° Ω	
	-2632 Nov 21 j 17:59	0° M		retrograde	-2626 Jan 04 j 21:06	10° Ω 05'48	
morning rise	-2632 Dec 11 j 20:42	15° M 35'51		opposition	-2626 Feb 11 j 07:00	1° Ω 47'00	4°49'22
	-2632 Dec 30 j 07:11	0° X		greatest brilliancy	-2626 Feb 12 j 16:22	1° Ω 15'17	-1.6m

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 28

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2626 Feb 15 j 23:29	30° RE		evening set	-2621 May 21 j 09:59	21° $\text{B}42'36$	
min. Earth dist.	-2626 Feb 17 j 14:13	29° $\text{E}23'30$	0.59712 AU		-2621 Jun 03 j 11:40	0° II	
direct	-2626 Mar 24 j 00:02	21° $\text{E}59'52$		max. Earth dist.	-2621 Jun 29 j 11:40	16° $\text{II}32'57$	2.66827 AU
	-2626 May 01 j 03:34	0° Q					
	-2626 Jun 27 j 17:27	0° M		conjunction	-2621 Jul 07 j 02:04	21° $\text{II}24'32$	1°05'36
desc. node	-2626 Jun 28 j 10:59	0° $\text{M}27'27$		minimum elong	-2621 Jul 07 j 01:12	21° $\text{II}23'09$	1°05'40
	-2626 Aug 11 j 04:09	0° A			-2621 Jul 20 j 11:10	0° E	
	-2626 Sep 20 j 14:49	0° M		morning rise	-2621 Aug 21 j 01:14	20° $\text{E}29'50$	
	-2626 Oct 29 j 12:00	0° A			-2621 Sep 04 j 12:18	0° Q	
	-2626 Dec 07 j 05:50	0° E			-2621 Oct 19 j 07:56	0° M	
	-2625 Jan 15 j 21:12	0° \approx			-2621 Dec 01 j 22:57	0° A	
evening set	-2625 Feb 22 j 03:08	27° $\approx 08'25$			-2620 Jan 13 j 15:24	0° M	
	-2625 Feb 26 j 03:32	0° H		desc. node	-2620 Feb 18 j 11:17	25° $\text{M}24'49$	
	-2625 Apr 10 j 09:07	0° Y			-2620 Feb 24 j 22:54	0° A	
					-2620 Apr 08 j 06:14	0° E	
conjunction	-2625 Apr 18 j 18:17	5° $\text{Y}39'39$	0°-9'-38		-2620 May 27 j 15:06	0° \approx	
minimum elong	-2625 Apr 18 j 18:46	5° $\text{Y}40'28$	0°09'38	retrograde	-2620 Jul 18 j 06:09	15° $\approx 29'37$	
behind sun begin	-2625 Apr 18 j 00:59	5° $\text{Y}10'33$		min. Earth dist.	-2620 Aug 14 j 15:11	10° $\approx 26'22$	0.44164 AU
behind sun end	-2625 Apr 19 j 12:34	6° $\text{Y}10'22$		greatest brilliancy	-2620 Aug 20 j 16:53	8° $\approx 25'14$	-2.4m
asc. node	-2625 May 05 j 04:47	16° $\text{Y}38'03$		opposition	-2620 Aug 22 j 15:17	7° $\approx 46'18$	-5°-36'-28
max. Earth dist.	-2625 May 12 j 04:00	21° $\text{Y}14'17$	2.60192 AU	direct	-2620 Sep 23 j 14:23	1° $\approx 28'27$	
	-2625 May 25 j 12:58	0° B			-2620 Dec 14 j 14:14	0° H	
morning rise	-2625 Jun 08 j 20:56	9° $\text{B}17'47$		asc. node	-2620 Dec 24 j 23:58	5° $\text{H}39'00$	
	-2625 Jul 11 j 06:50	0° II			-2619 Feb 05 j 07:47	0° Y	
	-2625 Aug 28 j 08:10	0° E			-2619 Mar 27 j 03:47	0° B	
	-2625 Oct 17 j 02:51	0° Q			-2619 May 14 j 19:38	0° II	
	-2625 Dec 10 j 11:37	0° M		evening set	-2619 Jun 27 j 10:57	27° $\text{II}34'36$	
retrograde	-2624 Feb 24 j 23:09	24° $\text{M}14'38$			-2619 Jul 01 j 05:30	0° E	
opposition	-2624 Mar 30 j 00:37	17° $\text{M}32'39$	2°35'56	max. Earth dist.	-2619 Jul 23 j 09:49	14° $\text{E}23'25$	2.62081 AU
greatest brilliancy	-2624 Mar 31 j 07:19	17° $\text{M}06'45$	-2.2m				
min. Earth dist.	-2624 Apr 07 j 13:03	14° $\text{M}41'29$	0.47632 AU	conjunction	-2619 Aug 13 j 01:28	28° $\text{E}02'22$	1°08'13
direct	-2624 May 06 j 09:19	9° $\text{M}20'53$		minimum elong	-2619 Aug 13 j 02:07	28° $\text{E}03'28$	1°08'16
desc. node	-2624 May 15 j 11:36	9° $\text{M}54'15$			-2619 Aug 15 j 23:54	0° Q	
	-2624 Jul 07 j 17:48	0° A		morning rise	-2619 Sep 28 j 21:20	29° $\text{Q}59'58$	
	-2624 Aug 23 j 16:55	0° M			-2619 Sep 28 j 21:21	0° M	
	-2624 Oct 04 j 06:18	0° A			-2619 Nov 10 j 00:02	0° A	
	-2624 Nov 13 j 17:30	0° E			-2619 Dec 20 j 15:45	0° M	
	-2624 Dec 24 j 17:44	0° \approx		desc. node	-2618 Jan 05 j 10:39	11° $\text{M}51'44$	
	-2623 Feb 05 j 03:39	0° H			-2618 Jan 29 j 09:29	0° A	
	-2623 Mar 21 j 06:56	0° Y			-2618 Mar 09 j 23:41	0° E	
asc. node	-2623 Mar 22 j 02:11	0° $\text{Y}32'04$			-2618 Apr 19 j 14:21	0° \approx	
evening set	-2623 Apr 10 j 20:09	13° $\text{Y}35'48$			-2618 Jun 02 j 09:38	0° H	
	-2623 May 06 j 00:06	0° B			-2618 Jul 27 j 16:40	0° Y	
				retrograde	-2618 Sep 03 j 18:47	8° $\text{Y}34'25$	
conjunction	-2623 May 30 j 07:04	15° $\text{B}38'35$	0°37'21	min. Earth dist.	-2618 Oct 06 j 12:03	1° $\text{Y}20'21$	0.56606 AU
minimum elong	-2623 May 30 j 05:51	15° $\text{B}36'38$	0°37'23		-2618 Oct 09 j 22:30	30° RH	
max. Earth dist.	-2623 Jun 06 j 00:30	19° $\text{B}57'04$	2.66229 AU	opposition	-2618 Oct 12 j 19:25	28° $\text{H}52'23$	-1°-19'-31
	-2623 Jun 21 j 18:02	0° II		greatest brilliancy	-2618 Oct 12 j 09:00	29° $\text{H}02'34$	-1.8m
morning rise	-2623 Jul 15 j 16:16	15° $\text{II}14'20$		asc. node	-2618 Nov 11 j 23:13	20° $\text{H}52'19$	
	-2623 Aug 07 j 20:59	0° E		direct	-2618 Nov 18 j 00:25	20° $\text{H}37'44$	
	-2623 Sep 23 j 22:21	0° Q			-2618 Dec 31 j 02:54	0° Y	
	-2623 Nov 09 j 22:50	0° M			-2617 Mar 03 j 13:00	0° B	
	-2623 Dec 27 j 14:57	0° A			-2617 Apr 24 j 17:56	0° II	
	-2622 Feb 16 j 03:44	0° M			-2617 Jun 12 j 11:14	0° E	
desc. node	-2622 Apr 02 j 11:51	21° $\text{M}50'36$			-2617 Jul 28 j 12:28	0° Q	
retrograde	-2622 May 09 j 09:26	29° $\text{M}28'00$		evening set	-2617 Aug 06 j 11:45	6° $\text{Q}02'41$	
opposition	-2622 Jun 08 j 18:23	24° $\text{M}27'11$	-4°-35'-20	max. Earth dist.	-2617 Aug 23 j 00:20	17° $\text{Q}21'19$	2.52435 AU
greatest brilliancy	-2622 Jun 08 j 22:54	24° $\text{M}24'11$	-2.9m		-2617 Sep 10 j 02:10	0° M	
min. Earth dist.	-2622 Jun 09 j 23:38	24° $\text{M}07'45$	0.37768 AU				
direct	-2622 Jul 09 j 04:02	19° $\text{M}18'42$		conjunction	-2617 Sep 25 j 08:59	10° $\text{M}54'26$	0°37'24
	-2622 Aug 21 j 04:22	0° A		minimum elong	-2617 Sep 25 j 10:35	10° $\text{M}57'19$	0°37'25
	-2622 Oct 14 j 04:40	0° E			-2617 Oct 21 j 11:55	0° A	
	-2622 Nov 29 j 13:55	0° \approx		morning rise	-2617 Nov 18 j 04:57	20° $\text{A}48'34$	
	-2621 Jan 14 j 02:56	0° H		desc. node	-2617 Nov 23 j 09:26	24° $\text{A}45'33$	
asc. node	-2621 Feb 07 j 00:21	15° $\text{H}36'26$			-2617 Nov 30 j 05:52	0° M	
	-2621 Mar 01 j 06:02	0° Y			-2616 Jan 08 j 00:26	0° A	
	-2621 Apr 17 j 04:24	0° B			-2616 Feb 15 j 14:52	0° E	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 29

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2616 Mar 25 j 22:55	0°≈				-2611 Aug 20 j 07:25	0°♎		
	-2616 May 06 j 02:31	0°♏				-2611 Sep 29 j 04:03	0°♌		
	-2616 Jun 19 j 15:17	0°♐				-2611 Nov 06 j 16:57	0°♏		
	-2616 Aug 11 j 01:03	0°♍				-2611 Dec 15 j 03:52	0°♎		
asc. node	-2616 Sep 28 j 22:46	16°♏45'48				-2610 Jan 23 j 12:19	0°≈		
retrograde	-2616 Oct 10 j 04:32	17°♏33'43		evening set		-2610 Jan 30 j 08:20	5°≈05'55		
min. Earth dist.	-2616 Nov 16 j 11:13	8°♏43'50	0.64989 AU			-2610 Mar 05 j 11:50	0°♏		
opposition	-2616 Nov 19 j 05:17	7°♏37'19	1°56'12						
greatest brilliancy	-2616 Nov 18 j 21:44	7°♏44'55	-1.4m	conjunction		-2610 Mar 30 j 12:29	17°♏38'21	0°-30'-9	
	-2616 Dec 12 j 05:05	30°♐		minimum elong		-2610 Mar 30 j 14:06	17°♏41'09	0°30'11	
direct	-2616 Dec 28 j 09:58	28°♐16'45				-2610 Apr 17 j 11:50	0°♐		
	-2615 Jan 14 j 19:37	0°♍		max. Earth dist.		-2610 Apr 30 j 18:24	8°♐58'41	2.56390 AU	
	-2615 Mar 30 j 14:35	0°♌		asc. node		-2610 May 21 j 19:33	22°♐58'18		
	-2615 May 22 j 02:54	0°♍		morning rise		-2610 May 23 j 15:45	24°♐10'58		
	-2615 Jul 08 j 08:24	0°♌				-2610 Jun 01 j 13:05	0°♍		
	-2615 Aug 21 j 02:57	0°♎				-2610 Jul 18 j 10:53	0°♌		
evening set	-2615 Sep 22 j 07:01	23°♎18'41				-2610 Sep 05 j 05:57	0°♍		
	-2615 Oct 01 j 06:47	0°♎				-2610 Oct 27 j 07:01	0°♌		
desc. node	-2615 Oct 10 j 07:22	6°♎47'09				-2609 Jan 01 j 06:40	0°♎		
max. Earth dist.	-2615 Oct 15 j 18:51	10°♎56'16	2.40077 AU	retrograde		-2609 Feb 02 j 22:08	5°♎35'35		
	-2615 Nov 09 j 14:24	0°♌				-2609 Mar 05 j 05:37	30°♎♌		
				opposition		-2609 Mar 10 j 11:58	28°♌09'28	3°55'51	
conjunction	-2615 Nov 19 j 16:24	7°♌50'43	0°-27'-28	greatest brilliancy		-2609 Mar 12 j 03:08	27°♌34'13	-1.9m	
minimum elong	-2615 Nov 19 j 14:21	7°♌46'44	0°27'30	min. Earth dist.		-2609 Mar 18 j 13:45	25°♌16'06	0.52809 AU	
	-2615 Dec 17 j 22:13	0°♏		direct		-2609 Apr 18 j 15:47	19°♌05'30		
morning rise	-2614 Jan 25 j 05:59	0°♎04'53				-2609 Jun 01 j 16:25	0°♎		
	-2614 Jan 25 j 03:29	0°♎		desc. node		-2609 Jun 02 j 03:59	0°♎12'47		
	-2614 Mar 05 j 03:17	0°≈				-2609 Jul 24 j 12:46	0°♎		
	-2614 Apr 14 j 17:44	0°♏				-2609 Sep 05 j 05:48	0°♌		
	-2614 May 27 j 17:53	0°♐				-2609 Oct 15 j 05:29	0°♏		
	-2614 Jul 13 j 05:16	0°♍				-2609 Nov 23 j 17:51	0°♎		
asc. node	-2614 Aug 16 j 23:12	20°♏17'37				-2608 Jan 03 j 00:44	0°≈		
	-2614 Sep 04 j 10:31	0°♌				-2608 Feb 13 j 20:28	0°♏		
retrograde	-2614 Nov 13 j 20:18	21°♌35'37		evening set		-2608 Mar 24 j 05:02	27°♏05'07		
opposition	-2614 Dec 23 j 13:30	12°♌03'23	3°59'46			-2608 Mar 28 j 12:49	0°♐		
greatest brilliancy	-2614 Dec 23 j 16:06	12°♌00'47	-1.2m	asc. node		-2608 Apr 07 j 18:44	6°♐51'41		
min. Earth dist.	-2614 Dec 24 j 14:33	11°♌38'22	0.67289 AU			-2608 May 12 j 22:47	0°♍		
direct	-2613 Feb 02 j 10:36	2°♌08'42							
	-2613 Apr 27 j 00:48	0°♍		conjunction		-2608 May 14 j 15:21	1°♏05'55	0°20'53	
	-2613 Jun 17 j 05:54	0°♌		minimum elong		-2608 May 14 j 14:31	1°♏04'33	0°20'55	
	-2613 Aug 01 j 04:20	0°♎		max. Earth dist.		-2608 May 27 j 10:45	9°♏23'22	2.64491 AU	
desc. node	-2613 Aug 28 j 06:19	19°♎23'16				-2608 Jun 28 j 14:45	0°♌		
	-2613 Sep 11 j 14:44	0°♎		morning rise		-2608 Jul 01 j 10:34	1°♌47'57		
	-2613 Oct 20 j 21:15	0°♌				-2608 Aug 14 j 23:23	0°♍		
evening set	-2613 Nov 24 j 03:44	26°♌53'34				-2608 Oct 01 j 18:28	0°♌		
	-2613 Nov 28 j 02:16	0°♏				-2608 Nov 19 j 11:30	0°♎		
	-2612 Jan 05 j 05:58	0°♎				-2607 Jan 10 j 06:14	0°♎		
						-2607 Mar 26 j 15:58	0°♌		
conjunction	-2612 Jan 29 j 10:38	18°♎43'27	-1°-6'-33	retrograde		-2607 Apr 07 j 17:07	0°♌52'22		
minimum elong	-2612 Jan 29 j 11:07	18°♎44'24	1°06'39	desc. node		-2607 Apr 19 j 03:52	0°♌02'47		
	-2612 Feb 13 j 06:10	0°≈				-2607 Apr 19 j 11:35	30°♐♎		
max. Earth dist.	-2612 Mar 18 j 22:55	25°≈43'00	2.43882 AU	opposition		-2607 May 08 j 22:35	25°♎27'14	-1°-21'-11	
	-2612 Mar 24 j 21:01	0°♏		greatest brilliancy		-2607 May 09 j 08:43	25°♎19'55	-2.7m	
morning rise	-2612 Apr 03 j 09:01	6°♏48'24		min. Earth dist.		-2607 May 14 j 20:30	23°♎44'53	0.40252 AU	
	-2612 May 06 j 15:09	0°♐		direct		-2607 Jun 11 j 02:44	19°♎15'02		
	-2612 Jun 20 j 20:35	0°♍				-2607 Jul 23 j 10:52	0°♌		
asc. node	-2612 Jul 03 j 21:47	8°♏19'57				-2607 Sep 13 j 16:15	0°♏		
	-2612 Aug 08 j 01:29	0°♌				-2607 Oct 27 j 20:45	0°♎		
	-2612 Sep 30 j 14:37	0°♍				-2607 Dec 10 j 00:35	0°≈		
retrograde	-2612 Dec 19 j 17:21	25°♍50'15				-2606 Jan 22 j 20:54	0°♏		
opposition	-2611 Jan 27 j 00:52	17°♍05'17	4°53'19	asc. node		-2606 Feb 23 j 17:01	21°♏15'37		
greatest brilliancy	-2611 Jan 28 j 01:32	16°♍41'20	-1.4m			-2606 Mar 08 j 23:47	0°♐		
min. Earth dist.	-2611 Jan 31 j 21:41	15°♍12'00	0.63112 AU			-2606 Apr 24 j 07:40	0°♍		
direct	-2611 Mar 09 j 04:00	7°♍06'53		evening set		-2606 May 06 j 04:04	7°♏35'10		
	-2611 May 19 j 12:52	0°♌				-2606 Jun 10 j 07:50	0°♌		
	-2611 Jul 08 j 09:13	0°♎		max. Earth dist.		-2606 Jun 20 j 12:58	6°♌30'19	2.67229 AU	
desc. node	-2611 Jul 15 j 05:19	4°♎34'10							

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 30

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

conjunction	-2606 Jun 22 j 14:37	7°II49'25	0°57'19			-2601 Oct 19 j 19:22	30°RΥ	
minimum elong	-2606 Jun 22 j 13:26	7°II47'31	0°57'23	min. Earth dist.		-2601 Nov 01 j 22:09	25°Υ15'48	0.62394 AU
	-2606 Jul 27 j 07:05	0°Ϣ		opposition		-2601 Nov 06 j 03:06	23°Υ34'39	0°49'41
morning rise	-2606 Aug 06 j 18:58	6°Ϣ45'03		greatest brilliancy		-2601 Nov 05 j 22:07	23°Υ39'39	-1.5m
	-2606 Sep 11 j 15:10	0°Ω		direct		-2601 Dec 14 j 07:27	14°Υ35'23	
	-2606 Oct 27 j 02:18	0°η				-2600 Feb 10 j 19:49	0°Ϣ	
	-2606 Dec 10 j 19:02	0°♂				-2600 Apr 09 j 12:43	0°II	
	-2605 Jan 24 j 02:45	0°♂				-2600 May 30 j 01:20	0°Ϣ	
desc. node	-2605 Mar 07 j 04:28	28°♂06'16				-2600 Jul 15 j 16:45	0°Ω	
	-2605 Mar 10 j 02:09	0°Ϣ				-2600 Aug 28 j 08:23	0°η	
	-2605 Apr 28 j 16:55	0°Ϣ		evening set		-2600 Sep 02 j 04:54	3°η27'04	
retrograde	-2605 Jun 25 j 02:08	18°Ϣ10'54		max. Earth dist.		-2600 Sep 18 j 01:42	14°η53'06	2.44876 AU
min. Earth dist.	-2605 Jul 21 j 19:04	13°Ϣ42'21	0.39886 AU			-2600 Oct 08 j 13:49	0°♂	
greatest brilliancy	-2605 Jul 26 j 06:47	12°Ϣ22'40	-2.7m					
opposition	-2605 Jul 28 j 00:03	11°Ϣ51'56	-6°-39'-23	conjunction		-2600 Oct 26 j 13:03	13°♂31'49	0°00'22
direct	-2605 Aug 27 j 06:22	6°Ϣ27'31		minimum elong		-2600 Oct 26 j 13:03	13°♂31'50	0°00'21
	-2605 Nov 06 j 08:49	0°≈		behind sun begin		-2600 Oct 25 j 12:50	12°♂45'52	
	-2605 Dec 28 j 14:46	0°Ϣ		behind sun end		-2600 Oct 27 j 13:17	14°♂17'51	
asc. node	-2604 Jan 11 j 15:13	8°Ϣ30'35		desc. node		-2600 Oct 27 j 01:47	13°♂55'59	
	-2604 Feb 15 j 13:20	0°Υ				-2600 Nov 17 j 00:43	0°♂	
	-2604 Apr 03 j 21:42	0°Ϣ				-2600 Dec 25 j 11:40	0°Ϣ	
	-2604 May 21 j 21:32	0°II		morning rise		-2600 Dec 27 j 04:01	1°Ϣ19'08	
evening set	-2604 Jun 12 j 16:29	13°II46'07				-2599 Feb 01 j 19:13	0°Ϣ	
	-2604 Jul 08 j 01:45	0°Ϣ				-2599 Mar 12 j 20:31	0°≈	
max. Earth dist.	-2604 Jul 13 j 07:46	3°Ϣ23'19	2.64549 AU			-2599 Apr 22 j 13:05	0°Ϣ	
						-2599 Jun 04 j 20:48	0°Υ	
conjunction	-2604 Jul 28 j 23:47	13°Ϣ34'12	1°10'42			-2599 Jul 22 j 12:13	0°Ϣ	
minimum elong	-2604 Jul 28 j 23:47	13°Ϣ34'12	1°10'45	asc. node		-2599 Sep 02 j 13:15	22°Ϣ27'06	
	-2604 Aug 22 j 21:23	0°Ω				-2599 Sep 20 j 07:24	0°II	
morning rise	-2604 Sep 12 j 15:15	13°Ω56'44		retrograde		-2599 Oct 31 j 09:56	8°II47'57	
	-2604 Oct 06 j 01:42	0°η				-2599 Dec 08 j 00:35	30°RϢ	
	-2604 Nov 17 j 15:37	0°♂		opposition		-2599 Dec 10 j 09:07	29°Ϣ03'17	3°19'52
	-2604 Dec 28 j 21:47	0°♂		greatest brilliancy		-2599 Dec 10 j 05:36	29°Ϣ06'50	-1.3m
desc. node	-2603 Jan 22 j 03:00	17°♂55'47		min. Earth dist.		-2599 Dec 09 j 21:59	29°Ϣ14'29	0.67156 AU
	-2603 Feb 07 j 07:52	0°Ϣ		direct		-2598 Jan 19 j 18:06	19°Ϣ18'48	
	-2603 Mar 19 j 17:38	0°Ϣ				-2598 Mar 08 j 00:05	0°II	
	-2603 Apr 30 j 15:40	0°≈				-2598 May 07 j 12:01	0°Ϣ	
	-2603 Jun 17 j 05:14	0°Ϣ				-2598 Jun 25 j 13:21	0°Ω	
retrograde	-2603 Aug 18 j 02:12	20°Ϣ29'27				-2598 Aug 08 j 21:34	0°η	
min. Earth dist.	-2603 Sep 17 j 16:26	14°Ϣ03'58	0.51944 AU	desc. node		-2598 Sep 13 j 23:26	26°η07'28	
greatest brilliancy	-2603 Sep 24 j 01:15	11°Ϣ40'13	-2.0m			-2598 Sep 19 j 04:13	0°♂	
opposition	-2603 Sep 25 j 02:55	11°Ϣ15'57	-2°-56'-54	evening set		-2598 Oct 28 j 15:04	0°♂08'55	
direct	-2603 Oct 29 j 19:21	3°Ϣ40'04				-2598 Oct 28 j 10:29	0°♂	
asc. node	-2603 Nov 28 j 14:35	8°Ϣ37'59				-2598 Dec 05 j 15:49	0°Ϣ	
	-2602 Jan 17 j 15:43	0°Υ						
	-2602 Mar 13 j 03:49	0°Ϣ		conjunction		-2597 Jan 01 j 07:55	21°Ϣ00'53	-1°-1'-23
	-2602 May 02 j 12:44	0°II		minimum elong		-2597 Jan 01 j 05:34	20°Ϣ56'17	1°01'27
	-2602 Jun 19 j 14:39	0°Ϣ				-2597 Jan 12 j 19:12	0°Ϣ	
evening set	-2602 Jul 21 j 08:22	20°Ϣ35'39		max. Earth dist.		-2597 Feb 12 j 02:43	23°Ϣ25'55	2.38924 AU
	-2602 Aug 04 j 11:51	0°Ω				-2597 Feb 20 j 18:04	0°≈	
max. Earth dist.	-2602 Aug 09 j 21:58	3°Ω38'38	2.56728 AU	morning rise		-2597 Mar 10 j 15:04	13°≈24'11	
						-2597 Apr 02 j 07:02	0°Ϣ	
conjunction	-2602 Sep 07 j 10:57	23°Ω12'27	0°53'52			-2597 May 15 j 00:57	0°Υ	
minimum elong	-2602 Sep 07 j 12:28	23°Ω15'05	0°53'53			-2597 Jun 29 j 12:30	0°Ϣ	
	-2602 Sep 17 j 03:37	0°η		asc. node		-2597 Jul 21 j 13:03	13°Ϣ45'58	
morning rise	-2602 Oct 27 j 17:42	29°η14'00				-2597 Aug 17 j 19:57	0°II	
	-2602 Oct 28 j 18:42	0°♂				-2597 Oct 15 j 17:03	0°Ϣ	
	-2602 Dec 07 j 19:36	0°♂		retrograde		-2597 Dec 05 j 19:41	12°Ϣ24'19	
desc. node	-2602 Dec 10 j 02:32	1°♂44'34		opposition		-2596 Jan 13 j 19:42	3°Ϣ17'58	4°42'01
	-2601 Jan 15 j 21:10	0°Ϣ		greatest brilliancy		-2596 Jan 14 j 11:09	3°Ϣ02'45	-1.3m
	-2601 Feb 23 j 18:12	0°Ϣ		min. Earth dist.		-2596 Jan 17 j 04:46	1°Ϣ58'10	0.65512 AU
	-2601 Apr 04 j 09:36	0°≈				-2596 Jan 22 j 07:41	30°RII	
	-2601 May 16 j 02:19	0°Ϣ		direct		-2596 Feb 24 j 01:18	23°II16'33	
	-2601 Jul 01 j 05:57	0°Υ				-2596 Mar 30 j 17:56	0°Ϣ	
	-2601 Sep 03 j 04:07	0°Ϣ				-2596 May 31 j 13:51	0°Ω	
retrograde	-2601 Sep 27 j 06:58	3°Ϣ32'10				-2596 Jul 17 j 13:54	0°η	
asc. node	-2601 Oct 16 j 14:10	0°Ϣ55'10		desc. node		-2596 Jul 31 j 21:26	9°η54'59	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 31

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2596 Aug 28 j 16:39	0°♄		max. Earth dist.	-2591 Jun 11 j 10:40	26°♄21'13	2.66818 AU
	-2596 Oct 07 j 05:34	0°♌			-2591 Jun 17 j 03:49	0°♊	
	-2596 Nov 14 j 13:54	0°♏		morning rise	-2591 Jul 23 j 17:35	23°♊19'01	
	-2596 Dec 22 j 20:46	0°♎			-2591 Aug 03 j 04:51	0°♏	
evening set	-2595 Jan 04 j 23:04	10°♎08'18			-2591 Sep 18 j 22:56	0°♏	
	-2595 Jan 31 j 00:47	0°♏			-2591 Nov 04 j 07:32	0°♏	
					-2591 Dec 20 j 14:57	0°♄	
conjunction	-2595 Mar 08 j 20:42	27°♏09'20	0°-49'-20		-2590 Feb 05 j 22:02	0°♌	
minimum elong	-2595 Mar 08 j 23:06	27°♏13'40	0°49'22	desc. node	-2590 Mar 23 j 20:20	26°♌41'58	
	-2595 Mar 12 j 19:30	0°♏			-2590 Mar 30 j 06:02	0°♏	
max. Earth dist.	-2595 Apr 17 j 08:11	24°♏59'15	2.51876 AU	retrograde	-2590 May 27 j 10:41	17°♏28'07	
	-2595 Apr 24 j 15:37	0°♏		min. Earth dist.	-2590 Jun 25 j 06:52	12°♏45'09	0.37691 AU
morning rise	-2595 May 05 j 19:52	7°♏35'11		opposition	-2590 Jun 27 j 02:39	12°♏15'52	-5°-58'-14
asc. node	-2595 Jun 07 j 12:17	29°♏14'47		greatest brilliancy	-2590 Jun 26 j 14:20	12°♏24'07	-2.9m
	-2595 Jun 08 j 16:04	0°♏		direct	-2590 Jul 26 j 22:12	7°♏18'02	
	-2595 Jul 25 j 21:07	0°♊			-2590 Oct 02 j 16:43	0°♎	
	-2595 Sep 13 j 19:21	0°♏			-2590 Nov 22 j 01:29	0°♏	
	-2595 Nov 09 j 01:47	0°♏			-2589 Jan 08 j 02:42	0°♏	
retrograde	-2594 Jan 14 j 18:56	19°♏11'07		asc. node	-2589 Jan 28 j 06:58	12°♏56'12	
opposition	-2594 Feb 20 j 15:02	11°♏08'54	4°37'22		-2589 Feb 24 j 00:06	0°♏	
greatest brilliancy	-2594 Feb 22 j 03:54	10°♏34'22	-1.7m		-2589 Apr 12 j 08:13	0°♏	
min. Earth dist.	-2594 Feb 27 j 15:10	8°♏31'56	0.57483 AU	evening set	-2589 May 29 j 22:27	0°♊03'08	
direct	-2594 Apr 01 j 22:14	1°♏32'48			-2589 May 29 j 20:29	0°♊	
desc. node	-2594 Jun 18 j 21:02	29°♏25'21		max. Earth dist.	-2589 Jul 04 j 20:47	22°♊55'07	2.66254 AU
	-2594 Jun 19 j 20:44	0°♏					
	-2594 Aug 04 j 23:49	0°♄		conjunction	-2589 Jul 15 j 08:25	29°♊39'03	1°08'39
	-2594 Sep 15 j 00:34	0°♌		minimum elong	-2589 Jul 15 j 07:50	29°♊38'07	1°08'43
	-2594 Oct 24 j 04:42	0°♏			-2589 Jul 15 j 21:26	0°♏	
	-2594 Dec 02 j 03:20	0°♎		morning rise	-2589 Aug 29 j 09:37	29°♏02'15	
	-2593 Jan 10 j 22:39	0°♏			-2589 Aug 30 j 20:31	0°♏	
	-2593 Feb 21 j 08:13	0°♏			-2589 Oct 14 j 10:31	0°♏	
evening set	-2593 Mar 05 j 23:17	8°♏52'55			-2589 Nov 26 j 15:34	0°♄	
	-2593 Apr 05 j 16:28	0°♏			-2588 Jan 07 j 17:42	0°♌	
asc. node	-2593 Apr 25 j 10:12	13°♏14'25		desc. node	-2588 Feb 08 j 21:16	23°♌15'26	
					-2588 Feb 18 j 04:24	0°♏	
conjunction	-2593 Apr 28 j 22:14	15°♏33'49	0°02'04		-2588 Mar 31 j 00:30	0°♎	
minimum elong	-2593 Apr 28 j 22:09	15°♏33'42	0°02'06		-2588 May 14 j 22:15	0°♏	
behind sun begin	-2593 Apr 28 j 00:53	14°♏58'27		retrograde	-2588 Jul 30 j 07:24	29°♏31'38	
behind sun end	-2593 Apr 29 j 19:26	16°♏08'56		min. Earth dist.	-2588 Aug 27 j 17:04	23°♏59'30	0.46909 AU
max. Earth dist.	-2593 May 18 j 08:32	28°♏20'45	2.61952 AU	greatest brilliancy	-2588 Sep 03 j 02:17	21°♏44'54	-2.3m
	-2593 May 20 j 21:23	0°♏		opposition	-2588 Sep 04 j 19:11	21°♏08'38	-4°-40'-47
morning rise	-2593 Jun 17 j 16:21	17°♏57'23		direct	-2588 Oct 07 j 19:11	14°♏20'33	
	-2593 Jul 06 j 13:34	0°♊			-2588 Dec 03 j 14:26	0°♏	
	-2593 Aug 23 j 07:11	0°♏		asc. node	-2588 Dec 15 j 05:14	5°♏31'23	
	-2593 Oct 11 j 04:17	0°♏			-2587 Jan 29 j 16:38	0°♏	
	-2593 Dec 01 j 17:28	0°♏			-2587 Mar 21 j 18:29	0°♏	
	-2592 Feb 03 j 14:57	0°♄			-2587 May 09 j 22:53	0°♊	
retrograde	-2592 Mar 10 j 04:26	6°♄38'32			-2587 Jun 26 j 14:06	0°♏	
opposition	-2592 Apr 12 j 05:49	0°♄24'15	1°26'21	evening set	-2587 Jul 06 j 00:37	6°♏04'45	
greatest brilliancy	-2592 Apr 12 j 23:51	0°♄09'49	-2.4m	max. Earth dist.	-2587 Jul 29 j 12:40	21°♏26'22	2.60390 AU
	-2592 Apr 13 j 12:04	30°♏			-2587 Aug 11 j 09:35	0°♏	
min. Earth dist.	-2592 Apr 20 j 10:53	27°♏47'08	0.44782 AU				
desc. node	-2592 May 05 j 20:15	23°♏55'20		conjunction	-2587 Aug 21 j 23:53	7°♏07'44	1°04'30
direct	-2592 May 18 j 07:41	22°♏51'12		minimum elong	-2587 Aug 22 j 00:55	7°♏09'28	1°04'33
	-2592 Jun 21 j 05:52	0°♄			-2587 Sep 24 j 05:22	0°♏	
	-2592 Aug 15 j 02:08	0°♌		morning rise	-2587 Oct 08 j 18:52	10°♏16'29	
	-2592 Sep 27 j 09:43	0°♏			-2587 Nov 05 j 04:03	0°♄	
	-2592 Nov 07 j 17:17	0°♎			-2587 Dec 15 j 14:29	0°♌	
	-2592 Dec 19 j 06:42	0°♏		desc. node	-2587 Dec 26 j 20:05	8°♌29'09	
	-2591 Jan 31 j 01:37	0°♏			-2586 Jan 24 j 01:54	0°♏	
asc. node	-2591 Mar 12 j 08:39	27°♏16'01			-2586 Mar 04 j 08:38	0°♎	
	-2591 Mar 16 j 11:20	0°♏			-2586 Apr 13 j 12:05	0°♏	
evening set	-2591 Apr 20 j 07:20	22°♏51'01			-2586 May 26 j 04:54	0°♏	
	-2591 May 01 j 08:22	0°♏			-2586 Jul 14 j 23:50	0°♏	
				retrograde	-2586 Sep 12 j 15:24	18°♏22'49	
conjunction	-2591 Jun 07 j 21:50	24°♏05'50	0°45'35	min. Earth dist.	-2586 Oct 16 j 10:41	10°♏45'17	0.58872 AU
minimum elong	-2591 Jun 07 j 20:33	24°♏03'47	0°45'38	opposition	-2586 Oct 22 j 01:18	8°♏32'05	0°-28'-35

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 32

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

greatest brilliancy	-2586 Oct 21 j 21:52	8°Υ35'29	-1.7m			-2580 Feb 08 j 11:56	0°≈	
asc. node	-2586 Nov 02 j 04:42	4°Υ25'05						
	-2586 Nov 27 j 08:09	30°℞℥		conjunction	-2580 Feb 13 j 10:05	3°≈42'31	-1°-3'-8	
direct	-2586 Nov 28 j 00:23	29°℥59'49		minimum elong	-2580 Feb 13 j 11:53	3°≈45'54	1°03'13	
	-2586 Nov 28 j 16:40	0°Υ			-2580 Mar 20 j 02:58	0°℥		
	-2585 Feb 24 j 09:37	0°℞		max. Earth dist.	-2580 Mar 31 j 13:05	8°℥10'32	2.46793 AU	
	-2585 Apr 19 j 06:55	0°Π		morning rise	-2580 Apr 15 j 21:04	18°℥58'11		
	-2585 Jun 07 j 13:55	0°☾			-2580 May 01 j 20:27	0°Υ		
	-2585 Jul 23 j 20:07	0°Ω			-2580 Jun 15 j 22:23	0°℞		
evening set	-2585 Aug 16 j 03:46	15°Ω49'38		asc. node	-2580 Jun 24 j 03:36	5°℞17'44		
max. Earth dist.	-2585 Aug 31 j 15:27	26°Ω36'26	2.49826 AU		-2580 Aug 02 j 15:41	0°Π		
	-2585 Sep 05 j 10:53	0°℞			-2580 Sep 23 j 10:16	0°☾		
					-2580 Nov 30 j 08:48	0°Ω		
conjunction	-2585 Oct 06 j 08:41	22°℞17'18	0°25'22	retrograde	-2580 Dec 28 j 18:38	4°Ω19'03		
minimum elong	-2585 Oct 06 j 09:59	22°℞19'41	0°25'21		-2579 Jan 23 j 20:59	30°℞☾		
	-2585 Oct 16 j 19:15	0°♄		opposition	-2579 Feb 04 j 14:53	25°☾47'47	4°52'52	
desc. node	-2585 Nov 13 j 18:22	21°♄03'16		greatest brilliancy	-2579 Feb 05 j 20:27	25°☾19'22	-1.5m	
	-2585 Nov 25 j 10:50	0°♍		min. Earth dist.	-2579 Feb 10 j 06:43	23°☾37'30	0.61344 AU	
morning rise	-2585 Dec 01 j 16:40	4°♍48'33		direct	-2579 Mar 17 j 13:19	15°☾54'32		
	-2584 Jan 03 j 02:33	0°♂			-2579 May 09 j 13:36	0°Ω		
	-2584 Feb 10 j 14:05	0°☾			-2579 Jul 01 j 22:00	0°℞		
	-2584 Mar 20 j 18:56	0°≈		desc. node	-2579 Jul 05 j 13:16	2°℞21'00		
	-2584 Apr 30 j 16:41	0°℥			-2579 Aug 14 j 16:04	0°♄		
	-2584 Jun 13 j 14:34	0°Υ			-2579 Sep 23 j 20:54	0°♍		
	-2584 Aug 02 j 11:11	0°℞			-2579 Nov 01 j 14:18	0°♂		
asc. node	-2584 Sep 19 j 05:28	21°℞00'46			-2579 Dec 10 j 04:29	0°☾		
retrograde	-2584 Oct 17 j 23:36	25°℞43'37			-2578 Jan 18 j 15:53	0°≈		
min. Earth dist.	-2584 Nov 25 j 02:04	16°℞37'30	0.66018 AU	evening set	-2578 Feb 12 j 13:47	18°≈21'20		
opposition	-2584 Nov 27 j 01:02	15°℞50'14	2°29'59		-2578 Feb 28 j 17:51	0°℥		
greatest brilliancy	-2584 Nov 26 j 17:54	15°℞57'24	-1.3m					
direct	-2583 Jan 05 j 17:03	6°℞20'08		conjunction	-2578 Apr 10 j 17:06	28°℥34'03	0°-18'-21	
	-2583 Mar 23 j 02:18	0°Π		minimum elong	-2578 Apr 10 j 18:04	28°℥35'41	0°18'22	
	-2583 May 16 j 13:48	0°☾			-2578 Apr 12 j 19:36	0°Υ		
	-2583 Jul 03 j 09:07	0°Ω		max. Earth dist.	-2578 May 07 j 14:01	16°Υ38'45	2.58581 AU	
	-2583 Aug 16 j 08:44	0°℞		asc. node	-2578 May 12 j 02:31	19°Υ38'29		
	-2583 Sep 26 j 13:48	0°♄			-2578 May 27 j 20:54	0°℞		
desc. node	-2583 Sep 30 j 16:51	3°♄05'36		morning rise	-2578 Jun 02 j 01:40	3°℞23'10		
evening set	-2583 Oct 04 j 15:50	6°♄04'24			-2578 Jul 13 j 15:22	0°Π		
	-2583 Nov 04 j 21:04	0°♍			-2578 Aug 30 j 22:46	0°☾		
max. Earth dist.	-2583 Nov 12 j 12:13	5°♍56'25	2.38047 AU		-2578 Oct 20 j 12:26	0°Ω		
					-2578 Dec 16 j 22:39	0°℞		
conjunction	-2583 Dec 04 j 11:52	23°♍10'41	0°-42'-15	retrograde	-2577 Feb 14 j 22:28	16°℞15'31		
minimum elong	-2583 Dec 04 j 08:56	23°♍04'55	0°42'17	opposition	-2577 Mar 21 j 17:37	9°℞12'42	3°15'30	
	-2583 Dec 13 j 03:43	0°♂		greatest brilliancy	-2577 Mar 23 j 05:42	8°℞41'18	-2.1m	
	-2582 Jan 20 j 07:43	0°☾		min. Earth dist.	-2577 Mar 30 j 04:54	6°℞16'58	0.49977 AU	
morning rise	-2582 Feb 10 j 18:44	16°☾38'46		direct	-2577 Apr 29 j 00:23	0°℞34'47		
	-2582 Feb 28 j 06:25	0°≈		desc. node	-2577 May 23 j 13:44	4°℞22'47		
	-2582 Apr 09 j 19:10	0°℥			-2577 Jul 15 j 20:27	0°♄		
	-2582 May 22 j 15:20	0°Υ			-2577 Aug 29 j 11:17	0°♍		
	-2582 Jul 07 j 14:32	0°℞			-2577 Oct 09 j 05:17	0°♂		
asc. node	-2582 Aug 07 j 05:03	18°℞28'06			-2577 Nov 18 j 04:26	0°☾		
	-2582 Aug 27 j 20:04	0°Π			-2577 Dec 28 j 19:25	0°≈		
retrograde	-2582 Nov 21 j 17:36	29°Π25'12			-2576 Feb 08 j 21:26	0°℥		
opposition	-2582 Dec 31 j 05:34	20°Π01'14	4°18'23		-2576 Mar 23 j 18:36	0°Υ		
greatest brilliancy	-2582 Dec 31 j 12:20	19°Π54'30	-1.3m	asc. node	-2576 Mar 29 j 00:17	3°Υ30'06		
min. Earth dist.	-2581 Jan 02 j 02:16	19°Π16'46	0.66929 AU	evening set	-2576 Apr 03 j 10:52	7°Υ07'28		
direct	-2581 Feb 10 j 07:02	10°Π02'58			-2576 May 08 j 07:28	0°℞		
	-2581 Apr 18 j 22:03	0°☾						
	-2581 Jun 11 j 10:33	0°Ω		conjunction	-2576 May 23 j 17:05	9°℞57'25	0°30'45	
	-2581 Jul 27 j 00:07	0°℞		minimum elong	-2576 May 23 j 15:59	9°℞55'38	0°30'48	
desc. node	-2581 Aug 18 j 14:59	16°℞01'22		max. Earth dist.	-2576 Jun 02 j 00:29	15°℞56'36	2.65563 AU	
	-2581 Sep 06 j 16:03	0°♄			-2576 Jun 23 j 23:56	0°Π		
	-2581 Oct 16 j 00:58	0°♍		morning rise	-2576 Jul 09 j 15:37	9°Π58'06		
	-2581 Nov 23 j 06:59	0°♂			-2576 Aug 10 j 04:53	0°☾		
evening set	-2581 Dec 09 j 16:07	12°♂54'33			-2576 Sep 26 j 13:21	0°Ω		
greatest brilliancy	-2581 Dec 25 j 18:31	25°♂33'00	1.2m		-2576 Nov 13 j 05:35	0°℞		
	-2581 Dec 31 j 11:13	0°☾			-2575 Jan 01 j 07:38	0°♄		

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 33

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2575 Feb 25 j 04:57	0°♄			-2570 Mar 07 j 00:08	0°♄		
desc. node	-2575 Apr 09 j 13:53	15°♄21'37			-2570 Apr 27 j 08:58	0°♄		
retrograde	-2575 Apr 25 j 04:50	16°♄50'48			-2570 Jun 14 j 20:07	0°♄		
opposition	-2575 May 25 j 19:50	11°♄44'33	-3°-12'-57	evening set	-2570 Jul 30 j 11:07	29°♄44'06		
greatest brilliancy	-2575 May 26 j 07:58	11°♄36'14	-2.8m		-2570 Jul 30 j 20:37	0°♄		
min. Earth dist.	-2575 May 29 j 09:31	10°♄46'03	0.38546 AU	max. Earth dist.	-2570 Aug 17 j 05:13	11°♄44'17	2.54441 AU	
direct	-2575 Jun 26 j 06:59	6°♄12'52			-2570 Sep 12 j 12:32	0°♄		
	-2575 Sep 02 j 05:54	0°♄						
	-2575 Oct 20 j 01:36	0°♄		conjunction	-2570 Sep 17 j 10:51	3°♄29'12	0°45'07	
	-2575 Dec 03 j 16:30	0°♄		minimum elong	-2570 Sep 17 j 12:28	3°♄32'05	0°45'07	
	-2574 Jan 17 j 08:08	0°♄			-2570 Oct 24 j 01:36	0°♄		
asc. node	-2574 Feb 13 j 21:54	18°♄13'33		morning rise	-2570 Nov 08 j 12:57	11°♄30'33		
	-2574 Mar 03 j 22:39	0°♄		desc. node	-2570 Nov 30 j 11:45	28°♄06'23		
	-2574 Apr 19 j 13:29	0°♄			-2570 Dec 02 j 23:19	0°♄		
evening set	-2574 May 14 j 23:38	16°♄11'14			-2569 Jan 10 j 21:11	0°♄		
	-2574 Jun 05 j 17:19	0°♄			-2569 Feb 18 j 14:01	0°♄		
max. Earth dist.	-2574 Jun 25 j 20:12	12°♄48'29	2.67117 AU		-2569 Mar 30 j 00:10	0°♄		
					-2569 May 10 j 07:03	0°♄		
conjunction	-2574 Jun 30 j 22:31	16°♄03'36	1°02'34		-2569 Jun 24 j 06:45	0°♄		
minimum elong	-2574 Jun 30 j 21:30	16°♄01'58	1°02'39		-2569 Aug 18 j 06:12	0°♄		
	-2574 Jul 22 j 16:48	0°♄		retrograde	-2569 Oct 05 j 08:00	12°♄08'30		
morning rise	-2574 Aug 14 j 22:20	15°♄00'28		asc. node	-2569 Oct 06 j 20:11	12°♄07'35		
	-2574 Sep 06 j 21:18	0°♄		min. Earth dist.	-2569 Nov 10 j 21:34	3°♄33'21	0.63943 AU	
	-2574 Oct 22 j 00:00	0°♄		opposition	-2569 Nov 14 j 07:49	2°♄10'42	1°29'48	
	-2574 Dec 05 j 01:49	0°♄		greatest brilliancy	-2569 Nov 14 j 00:37	2°♄17'56	-1.4m	
	-2573 Jan 17 j 09:54	0°♄			-2569 Nov 19 j 20:17	30°♄		
desc. node	-2573 Feb 25 j 13:17	27°♄10'27		direct	-2569 Dec 23 j 02:33	22°♄59'07		
	-2573 Mar 01 j 15:46	0°♄			-2568 Jan 29 j 05:18	0°♄		
	-2573 Apr 15 j 17:49	0°♄			-2568 Apr 03 j 04:41	0°♄		
	-2573 Jun 13 j 04:40	0°♄			-2568 May 24 j 20:04	0°♄		
retrograde	-2573 Jul 09 j 07:17	4°♄30'49			-2568 Jul 10 j 20:32	0°♄		
	-2573 Aug 04 j 09:06	30°♄			-2568 Aug 23 j 15:13	0°♄		
min. Earth dist.	-2573 Aug 05 j 01:55	29°♄47'07	0.42083 AU	evening set	-2568 Sep 13 j 08:28	14°♄52'30		
greatest brilliancy	-2573 Aug 10 j 15:22	28°♄01'46	-2.5m	max. Earth dist.	-2568 Oct 01 j 19:29	28°♄28'07	2.42141 AU	
opposition	-2573 Aug 12 j 14:12	27°♄24'28	-6°-12'-3		-2568 Oct 03 j 20:47	0°♄		
direct	-2573 Sep 12 j 17:32	21°♄31'36		desc. node	-2568 Oct 17 j 09:29	10°♄10'19		
	-2573 Oct 21 j 21:15	0°♄						
	-2573 Dec 20 j 22:14	0°♄		conjunction	-2568 Nov 08 j 20:05	27°♄20'30	0°-15'-28	
asc. node	-2572 Jan 01 j 21:13	6°♄53'33		minimum elong	-2568 Nov 08 j 18:57	27°♄18'19	0°15'30	
	-2572 Feb 09 j 16:29	0°♄		behind sun begin	-2568 Nov 08 j 10:49	27°♄02'37		
	-2572 Mar 29 j 19:04	0°♄		behind sun end	-2568 Nov 09 j 03:06	27°♄34'02		
	-2572 May 17 j 03:39	0°♄			-2568 Nov 12 j 06:38	0°♄		
evening set	-2572 Jun 21 j 03:40	22°♄06'24			-2568 Dec 20 j 16:10	0°♄		
	-2572 Jul 03 j 11:29	0°♄		morning rise	-2567 Jan 12 j 09:15	17°♄50'37		
max. Earth dist.	-2572 Jul 19 j 01:37	10°♄05'04	2.63289 AU		-2567 Jan 27 j 22:10	0°♄		
					-2567 Mar 07 j 21:53	0°♄		
conjunction	-2572 Aug 06 j 13:21	22°♄12'10	1°09'49		-2567 Apr 17 j 11:52	0°♄		
minimum elong	-2572 Aug 06 j 13:44	22°♄12'49	1°09'53		-2567 May 30 j 12:59	0°♄		
	-2572 Aug 18 j 07:11	0°♄			-2567 Jul 16 j 08:00	0°♄		
morning rise	-2572 Sep 21 j 18:09	23°♄21'30		asc. node	-2567 Aug 23 j 20:15	21°♄51'15		
	-2572 Oct 01 j 08:34	0°♄			-2567 Sep 09 j 07:44	0°♄		
	-2572 Nov 12 j 16:45	0°♄		retrograde	-2567 Nov 08 j 02:35	16°♄36'53		
	-2572 Dec 23 j 15:06	0°♄		opposition	-2567 Dec 17 j 23:08	6°♄58'31	3°44'16	
desc. node	-2571 Jan 12 j 12:43	14°♄51'48		greatest brilliancy	-2567 Dec 17 j 22:41	6°♄58'58	-1.2m	
	-2571 Feb 01 j 15:41	0°♄		min. Earth dist.	-2567 Dec 18 j 07:34	6°♄50'04	0.67354 AU	
	-2571 Mar 13 j 13:03	0°♄			-2566 Jan 06 j 14:57	30°♄		
	-2571 Apr 23 j 13:58	0°♄		direct	-2566 Jan 27 j 15:37	27°♄08'00		
	-2571 Jun 07 j 10:24	0°♄			-2566 Feb 19 j 10:57	0°♄		
	-2571 Aug 12 j 19:50	0°♄			-2566 Apr 30 j 22:20	0°♄		
retrograde	-2571 Aug 27 j 19:48	1°♄31'25			-2566 Jun 20 j 04:52	0°♄		
	-2571 Sep 11 j 05:26	30°♄			-2566 Aug 03 j 22:28	0°♄		
min. Earth dist.	-2571 Sep 28 j 14:58	24°♄38'24	0.54589 AU	desc. node	-2566 Sep 04 j 08:08	22°♄34'44		
opposition	-2571 Oct 05 j 11:34	21°♄59'42	-1°-59'-35		-2566 Sep 14 j 08:11	0°♄		
greatest brilliancy	-2571 Oct 04 j 18:53	22°♄15'48	-1.9m		-2566 Oct 23 j 15:14	0°♄		
direct	-2571 Nov 10 j 00:28	14°♄01'27		evening set	-2566 Nov 12 j 09:01	15°♄26'28		
asc. node	-2571 Nov 18 j 20:50	14°♄30'39			-2566 Nov 30 j 20:30	0°♄		
	-2570 Jan 07 j 20:00	0°♄			-2565 Jan 07 j 23:35	0°♄		

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 34

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

conjunction	-2565 Jan 17 j 08:52	7°☾18'45	-1°-6'-10	opposition	-2560 Apr 26 j 17:28	14°♂25'34	0°-1'-56
minimum elong	-2565 Jan 17 j 08:05	7°☾17'13	1°06'15	desc. node	-2560 Apr 26 j 05:37	14°♂34'31	
	-2565 Feb 15 j 22:23	0°≈		greatest brilliancy	-2561 May 28 j 17:46	8°♂06'41	-6.4m
max. Earth dist.	-2565 Mar 07 j 14:45	14°≈44'40	2.41549 AU	min. Earth dist.	-2560 May 03 j 23:02	12°♂14'17	0.42111 AU
morning rise	-2565 Mar 25 j 02:01	27°≈33'03		direct	-2560 May 31 j 06:45	7°♂36'23	
	-2565 Mar 28 j 11:13	0°✠			-2560 Aug 03 j 22:58	0°♂	
	-2565 May 10 j 03:39	0°♀			-2560 Sep 19 j 14:52	0°♂	
	-2565 Jun 24 j 09:48	0°♂			-2560 Nov 01 j 05:54	0°☾	
asc. node	-2565 Jul 11 j 19:20	11°♂01'57			-2560 Dec 13 j 13:19	0°≈	
	-2565 Aug 11 j 22:38	0°♂			-2559 Jan 25 j 20:17	0°✠	
	-2565 Oct 06 j 01:16	0°☾		asc. node	-2559 Mar 02 j 14:36	24°♂03'49	
retrograde	-2565 Dec 14 j 05:31	20°☾28'40			-2559 Mar 11 j 13:53	0°♀	
opposition	-2564 Jan 21 j 21:00	11°☾33'26	4°49'55		-2559 Apr 26 j 15:53	0°♂	
greatest brilliancy	-2564 Jan 22 j 17:28	11°☾13'26	-1.4m	evening set	-2559 Apr 29 j 12:01	1°♂49'37	
min. Earth dist.	-2564 Jan 26 j 01:39	9°☾55'07	0.64317 AU		-2559 Jun 12 j 13:25	0°♂	
direct	-2564 Mar 03 j 02:04	1°☾32'54					
	-2564 May 24 j 08:05	0°♂		conjunction	-2559 Jun 16 j 09:40	2°♂26'58	0°52'48
	-2564 Jul 11 j 20:38	0°♂		minimum elong	-2559 Jun 16 j 08:23	2°♂24'57	0°52'52
desc. node	-2564 Jul 22 j 07:29	7°♂06'02		max. Earth dist.	-2559 Jun 16 j 20:01	2°♂43'29	2.67148 AU
	-2564 Aug 23 j 10:50	0°♂			-2559 Jul 29 j 13:16	0°☾	
	-2564 Oct 02 j 04:31	0°♂		morning rise	-2559 Jul 31 j 19:19	1°☾26'35	
	-2564 Nov 09 j 15:20	0°♂			-2559 Sep 14 j 01:53	0°♂	
	-2564 Dec 17 j 23:44	0°☾			-2559 Oct 29 j 22:10	0°♂	
evening set	-2563 Jan 19 j 15:10	25°☾02'20			-2559 Dec 14 j 06:20	0°♂	
	-2563 Jan 26 j 05:09	0°≈			-2558 Jan 28 j 15:59	0°♂	
	-2563 Mar 08 j 01:12	0°✠		desc. node	-2558 Mar 14 j 06:18	28°♂28'56	
					-2558 Mar 16 j 17:58	0°♂	
conjunction	-2563 Mar 21 j 12:15	9°♂34'59	0°-38'-39		-2558 May 14 j 18:59	0°☾	
minimum elong	-2563 Mar 21 j 14:18	9°♂38'35	0°38'40	retrograde	-2558 Jun 13 j 02:23	5°☾23'53	
	-2563 Apr 19 j 21:59	0°♀		min. Earth dist.	-2558 Jul 10 j 08:26	0°☾57'05	0.38555 AU
max. Earth dist.	-2563 Apr 25 j 12:44	3°♀49'14	2.54460 AU		-2558 Jul 13 j 17:45	30°♂♂	
morning rise	-2563 May 16 j 06:00	17°♀43'47		opposition	-2558 Jul 14 j 21:30	29°♂40'26	-6°-38'-23
asc. node	-2563 May 28 j 17:00	25°♀57'05		greatest brilliancy	-2558 Jul 13 j 14:56	0°☾01'59	-2.8m
	-2563 Jun 03 j 21:32	0°♂		direct	-2558 Aug 13 j 17:49	24°♂33'45	
	-2563 Jul 20 j 21:02	0°♂			-2558 Sep 12 j 22:47	0°☾	
	-2563 Sep 08 j 01:11	0°☾			-2558 Nov 13 j 06:38	0°≈	
	-2563 Oct 31 j 10:46	0°♂			-2557 Jan 01 j 16:07	0°✠	
retrograde	-2562 Jan 25 j 08:08	28°♂44'48		asc. node	-2557 Jan 18 j 12:31	10°♂31'39	
opposition	-2562 Mar 02 j 12:49	21°♂01'24	4°16'51		-2557 Feb 18 j 13:35	0°♀	
greatest brilliancy	-2562 Mar 04 j 03:40	20°♂25'45	-1.8m		-2557 Apr 07 j 10:02	0°♂	
min. Earth dist.	-2562 Mar 10 j 04:38	18°♂13'33	0.54994 AU		-2557 May 25 j 04:30	0°♂	
direct	-2562 Apr 11 j 06:46	11°♂40'59		evening set	-2557 Jun 07 j 09:58	8°♂21'48	
desc. node	-2562 Jun 09 j 06:19	29°♂33'09		max. Earth dist.	-2557 Jul 10 j 08:16	29°♂22'41	2.65407 AU
	-2562 Jun 10 j 03:01	0°♂			-2557 Jul 11 j 07:28	0°☾	
	-2562 Jul 29 j 05:25	0°♂					
	-2562 Sep 09 j 02:39	0°♂		conjunction	-2557 Jul 23 j 17:12	8°☾00'57	1°10'20
	-2562 Oct 18 j 16:52	0°♂		minimum elong	-2557 Jul 23 j 16:56	8°☾00'32	1°10'25
	-2562 Nov 26 j 21:58	0°☾			-2557 Aug 26 j 05:14	0°♂	
	-2561 Jan 05 j 22:21	0°≈		morning rise	-2557 Sep 07 j 00:33	7°♂52'40	
	-2561 Feb 16 j 12:03	0°✠			-2557 Oct 09 j 14:24	0°♂	
evening set	-2561 Mar 17 j 03:48	19°♂55'30			-2557 Nov 21 j 11:25	0°♂	
	-2561 Mar 31 j 23:17	0°♀			-2556 Jan 02 j 02:17	0°♂	
asc. node	-2561 Apr 15 j 16:00	9°♀51'34		desc. node	-2556 Jan 30 j 05:23	20°♂37'59	
					-2556 Feb 11 j 22:25	0°♂	
conjunction	-2561 May 08 j 15:39	25°♀02'28	0°13'14		-2556 Mar 23 j 20:21	0°☾	
minimum elong	-2561 May 08 j 15:04	25°♀01'32	0°13'15		-2556 May 05 j 16:24	0°≈	
behind sun begin	-2561 May 08 j 03:37	24°♀42'46			-2556 Jun 25 j 19:55	0°✠	
behind sun end	-2561 May 09 j 02:32	25°♀20'17		retrograde	-2556 Aug 10 j 06:53	12°♂14'29	
	-2561 May 16 j 05:50	0°♂		min. Earth dist.	-2556 Sep 08 j 21:53	6°♂12'21	0.49704 AU
max. Earth dist.	-2561 May 24 j 07:59	5°♂15'29	2.63456 AU	greatest brilliancy	-2556 Sep 15 j 08:24	3°♂50'34	-2.1m
morning rise	-2561 Jun 26 j 05:58	26°♂24'49		opposition	-2556 Sep 16 j 17:08	3°♂20'22	-3°-41'-22
	-2561 Jul 01 j 21:04	0°♂			-2556 Sep 26 j 10:08	30°♂≈	
	-2561 Aug 18 j 08:50	0°☾		direct	-2556 Oct 20 j 15:08	26°≈04'50	
	-2561 Oct 05 j 13:57	0°♂			-2556 Nov 15 j 16:45	0°✠	
	-2561 Nov 24 j 07:25	0°♂		asc. node	-2556 Dec 05 j 11:51	6°♂50'01	
	-2560 Jan 18 j 06:21	0°♂			-2555 Jan 22 j 09:09	0°♀	
retrograde	-2560 Mar 25 j 18:04	20°♂11'36			-2555 Mar 16 j 04:37	0°♂	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 35

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2555 May 05 j 00:36	0°♊		max. Earth dist.	-2550 Jan 07 j 01:34	23°♊21'34	2.37556 AU
	-2555 Jun 21 j 22:17	0°♋			-2550 Jan 15 j 13:01	0°♌	
evening set	-2555 Jul 14 j 17:11	14°♋43'31			-2550 Feb 23 j 10:49	0°♍	
max. Earth dist.	-2555 Aug 04 j 21:58	28°♋43'36	2.58452 AU	morning rise	-2550 Feb 26 j 19:20	2°♍32'19	
	-2555 Aug 06 j 19:41	0°♌			-2550 Apr 04 j 22:20	0°♎	
					-2550 May 17 j 15:15	0°♏	
conjunction	-2555 Aug 31 j 05:49	16°♌33'38	0°59'02		-2550 Jul 02 j 05:16	0°♐	
minimum elong	-2555 Aug 31 j 07:09	16°♌35'57	0°59'04	asc. node	-2550 Jul 28 j 10:21	16°♐11'54	
	-2555 Sep 19 j 14:10	0°♑			-2550 Aug 21 j 02:26	0°♑	
morning rise	-2555 Oct 19 j 07:09	21°♑11'18			-2550 Oct 23 j 02:29	0°♒	
	-2555 Oct 31 j 09:23	0°♓		retrograde	-2550 Nov 29 j 17:36	7°♒17'39	
	-2555 Dec 10 j 14:52	0°♑			-2549 Jan 02 j 23:43	30°♒♊	
desc. node	-2555 Dec 17 j 04:35	4°♑59'02		opposition	-2549 Jan 07 j 23:45	28°♒02'47	4°33'17
	-2554 Jan 18 j 20:52	0°♊		greatest brilliancy	-2549 Jan 08 j 11:08	27°♒51'30	-1.3m
	-2554 Feb 26 j 21:34	0°♋		min. Earth dist.	-2549 Jan 10 j 16:14	26°♒58'59	0.66281 AU
	-2554 Apr 07 j 16:47	0°♌		direct	-2549 Feb 18 j 04:32	18°♒02'12	
	-2554 May 19 j 16:37	0°♍			-2549 Apr 08 j 20:43	0°♓	
	-2554 Jul 05 j 20:38	0°♎			-2549 Jun 05 j 06:33	0°♌	
retrograde	-2554 Sep 21 j 03:10	27°♎38'39			-2549 Jul 21 j 16:02	0°♍	
asc. node	-2554 Oct 23 j 11:48	20°♎37'39		desc. node	-2549 Aug 08 j 23:52	12°♍49'03	
min. Earth dist.	-2554 Oct 25 j 23:18	19°♎39'22	0.60931 AU		-2549 Sep 01 j 15:03	0°♎	
opposition	-2554 Oct 30 j 20:02	17°♎43'00	0°18'14		-2549 Oct 11 j 02:45	0°♏	
greatest brilliancy	-2554 Oct 30 j 17:51	17°♎45'11	-1.6m		-2549 Nov 18 j 10:13	0°♐	
direct	-2554 Dec 07 j 12:19	8°♎55'09		evening set	-2549 Dec 25 j 04:26	28°♐51'43	
	-2553 Feb 16 j 06:26	0°♑			-2549 Dec 26 j 15:28	0°♑	
	-2553 Apr 13 j 14:39	0°♒			-2548 Feb 03 j 17:04	0°♒	
	-2553 Jun 02 j 14:45	0°♓					
	-2553 Jul 19 j 03:23	0°♌		conjunction	-2548 Feb 27 j 14:12	17°♒47'18	0°-56'-12
evening set	-2553 Aug 26 j 04:52	26°♌02'07		minimum elong	-2548 Feb 27 j 16:36	17°♒51'42	0°56'15
	-2553 Aug 31 j 19:56	0°♑			-2548 Mar 15 j 08:59	0°♋	
max. Earth dist.	-2553 Sep 10 j 07:48	6°♑45'24	2.47120 AU	max. Earth dist.	-2548 Apr 10 j 19:29	18°♋44'43	2.49657 AU
	-2553 Oct 12 j 03:41	0°♒		morning rise	-2548 Apr 27 j 12:40	0°♎17'38	
					-2548 Apr 27 j 02:21	0°♏	
conjunction	-2553 Oct 18 j 00:23	4°♒22'32	0°11'40		-2548 Jun 11 j 01:52	0°♐	
minimum elong	-2553 Oct 18 j 01:05	4°♒23'51	0°11'40	asc. node	-2548 Jun 14 j 09:57	2°♐10'00	
behind sun begin	-2553 Oct 17 j 08:22	3°♒52'34			-2548 Jul 28 j 10:02	0°♑	
behind sun end	-2553 Oct 18 j 17:48	4°♒55'08			-2548 Sep 16 j 22:39	0°♓	
desc. node	-2553 Nov 04 j 04:02	17°♒19'21			-2548 Nov 15 j 03:39	0°♌	
	-2553 Nov 20 j 17:11	0°♍		retrograde	-2547 Jan 07 j 05:36	13°♌06'26	
morning rise	-2553 Dec 16 j 04:53	19°♍47'10		opposition	-2547 Feb 13 j 13:43	4°♌50'14	4°46'08
	-2553 Dec 29 j 06:23	0°♊		greatest brilliancy	-2547 Feb 14 j 23:33	4°♌18'08	-1.6m
	-2552 Feb 05 j 15:12	0°♋		min. Earth dist.	-2547 Feb 19 j 23:55	2°♌24'24	0.59331 AU
greatest brilliancy	-2552 Feb 19 j 19:52	10°♋59'53	1.2m		-2547 Feb 26 j 18:16	30°♌♋	
	-2552 Mar 15 j 16:59	0°♌		direct	-2547 Mar 26 j 05:13	25°♋05'01	
	-2552 Apr 25 j 10:13	0°♍			-2547 Apr 24 j 10:03	0°♌	
	-2552 Jun 07 j 21:02	0°♎			-2547 Jun 24 j 18:31	0°♍	
	-2552 Jul 26 j 03:46	0°♏		desc. node	-2547 Jun 25 j 23:15	0°♍44'10	
asc. node	-2552 Sep 09 j 10:53	22°♏48'04			-2547 Aug 08 j 18:24	0°♎	
	-2552 Sep 30 j 04:42	0°♑			-2547 Sep 18 j 10:01	0°♏	
retrograde	-2552 Oct 25 j 17:00	3°♑44'01			-2547 Oct 27 j 09:06	0°♊	
	-2552 Nov 18 j 07:52	30°♑♋			-2547 Dec 05 j 03:10	0°♌	
opposition	-2552 Dec 04 j 18:10	23°♑54'53	3°00'16		-2546 Jan 13 j 17:43	0°♍	
min. Earth dist.	-2552 Dec 03 j 14:34	24°♑22'37	0.66779 AU		-2546 Feb 23 j 22:36	0°♎	
greatest brilliancy	-2552 Dec 04 j 12:35	24°♑00'29	-1.3m	evening set	-2546 Feb 25 j 00:13	0°♋45'33	
direct	-2551 Jan 13 j 20:43	14°♑16'25			-2546 Apr 08 j 02:28	0°♏	
	-2551 Mar 14 j 05:25	0°♑					
	-2551 May 10 j 17:52	0°♓		conjunction	-2546 Apr 21 j 07:31	8°♏54'52	0°-6'-28
	-2551 Jun 28 j 07:10	0°♌		minimum elong	-2546 Apr 21 j 07:49	8°♏55'23	0°06'29
	-2551 Aug 11 j 13:03	0°♍		behind sun begin	-2546 Apr 20 j 11:32	8°♏21'22	
desc. node	-2551 Sep 21 j 02:01	29°♍26'07		behind sun end	-2546 Apr 22 j 04:07	9°♏29'22	
	-2551 Sep 21 j 20:10	0°♎		asc. node	-2546 May 02 j 08:05	16°♏16'16	
evening set	-2551 Oct 17 j 19:44	19°♎42'06		max. Earth dist.	-2546 May 14 j 00:50	24°♏00'01	2.60542 AU
	-2551 Oct 31 j 03:35	0°♏			-2546 May 23 j 04:37	0°♐	
	-2551 Dec 08 j 09:46	0°♊		morning rise	-2546 Jun 11 j 03:19	12°♐17'15	
					-2546 Jul 08 j 20:38	0°♑	
conjunction	-2551 Dec 19 j 23:24	9°♊07'28	0°-54'-31		-2546 Aug 25 j 18:58	0°♓	
minimum elong	-2551 Dec 19 j 20:23	9°♊01'32	0°54'34		-2546 Oct 14 j 06:43	0°♌	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 36

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2546 Dec 06 j 16:18	0°♎				-2540 Mar 24 j 13:08	0°♎		
retrograde	-2545 Feb 28 j 03:09	27°♎50'11				-2540 May 12 j 08:30	0°♎		
opposition	-2545 Apr 03 j 00:10	21°♎13'23	2°19'42			-2540 Jun 28 j 20:52	0°♎		
greatest brilliancy	-2545 Apr 04 j 04:17	20°♎49'57	-2.2m	evening set		-2540 Jun 29 j 15:26	0°♎29'48		
min. Earth dist.	-2545 Apr 11 j 12:46	18°♎23'39	0.47094 AU	max. Earth dist.		-2540 Jul 24 j 23:50	16°♎56'40	2.61787 AU	
direct	-2545 May 10 j 05:01	13°♎08'21				-2540 Aug 13 j 17:22	0°♎		
desc. node	-2545 May 13 j 22:38	13°♎14'04							
	-2545 Jul 04 j 09:59	0°♎		conjunction		-2540 Aug 15 j 06:49	1°♎02'34	1°07'21	
	-2545 Aug 21 j 20:33	0°♎		minimum elong		-2540 Aug 15 j 07:34	1°♎03'50	1°07'24	
	-2545 Oct 02 j 19:12	0°♎				-2540 Sep 26 j 16:29	0°♎		
	-2545 Nov 12 j 09:51	0°♎		morning rise		-2540 Oct 01 j 06:12	3°♎11'40		
	-2545 Dec 23 j 11:07	0°♎				-2540 Nov 07 j 20:13	0°♎		
	-2544 Feb 03 j 20:48	0°♎				-2540 Dec 18 j 12:17	0°♎		
	-2544 Mar 18 j 23:19	0°♎		desc. node		-2539 Jan 02 j 22:26	11°♎35'24		
asc. node	-2544 Mar 19 j 06:24	0°♎11'49				-2539 Jan 27 j 05:27	0°♎		
evening set	-2544 Apr 13 j 05:12	16°♎41'20				-2539 Mar 07 j 17:45	0°♎		
	-2544 May 03 j 15:42	0°♎				-2539 Apr 17 j 03:59	0°♎		
						-2539 May 30 j 12:03	0°♎		
conjunction	-2544 Jun 01 j 11:59	18°♎34'13	0°39'43			-2539 Jul 22 j 08:11	0°♎		
minimum elong	-2544 Jun 01 j 10:44	18°♎32'12	0°39'46	retrograde		-2539 Sep 06 j 00:52	11°♎49'22		
max. Earth dist.	-2544 Jun 07 j 12:32	22°♎25'32	2.66360 AU	min. Earth dist.		-2539 Oct 08 j 23:06	4°♎31'30	0.57037 AU	
	-2544 Jun 19 j 09:09	0°♎		opposition		-2539 Oct 15 j 04:24	2°♎05'17	-1°-5'-28	
morning rise	-2544 Jul 17 j 18:16	18°♎04'47		greatest brilliancy		-2539 Oct 14 j 19:51	2°♎13'39	-1.8m	
	-2544 Aug 05 j 11:36	0°♎				-2539 Oct 20 j 15:38	30°♎		
	-2544 Sep 21 j 11:40	0°♎		asc. node		-2539 Nov 09 j 02:12	24°♎39'56		
	-2544 Nov 07 j 08:39	0°♎		direct		-2539 Nov 20 j 13:01	23°♎47'24		
	-2544 Dec 24 j 16:23	0°♎				-2539 Dec 24 j 17:14	0°♎		
	-2543 Feb 12 j 05:35	0°♎				-2538 Feb 28 j 08:25	0°♎		
desc. node	-2543 Mar 30 j 21:56	23°♎53'27				-2538 Apr 22 j 01:38	0°♎		
	-2543 Apr 16 j 20:02	0°♎				-2538 Jun 10 j 00:31	0°♎		
retrograde	-2543 May 13 j 13:44	4°♎12'55				-2538 Jul 26 j 05:25	0°♎		
	-2543 Jun 09 j 19:08	30°♎		evening set		-2538 Aug 08 j 20:16	9°♎10'40		
opposition	-2543 Jun 12 j 20:51	29°♎11'30	-4°-57'-43	max. Earth dist.		-2538 Aug 25 j 02:39	20°♎20'45	2.51956 AU	
greatest brilliancy	-2543 Jun 12 j 22:47	29°♎10'13	-2.9m			-2538 Sep 07 j 21:45	0°♎		
min. Earth dist.	-2543 Jun 13 j 12:54	29°♎00'53	0.37685 AU						
direct	-2543 Jul 13 j 02:48	24°♎06'42		conjunction		-2538 Sep 27 j 22:37	14°♎18'44	0°34'30	
	-2543 Aug 13 j 03:45	0°♎		minimum elong		-2538 Sep 28 j 00:09	14°♎21'30	0°34'29	
	-2543 Oct 10 j 16:09	0°♎				-2538 Oct 19 j 09:15	0°♎		
	-2543 Nov 26 j 18:28	0°♎		desc. node		-2538 Nov 20 j 20:32	24°♎24'30		
	-2542 Jan 11 j 13:33	0°♎		morning rise		-2538 Nov 21 j 05:22	24°♎41'21		
asc. node	-2542 Feb 04 j 04:38	15°♎23'44				-2538 Nov 28 j 04:06	0°♎		
	-2542 Feb 26 j 19:01	0°♎				-2537 Jan 05 j 22:47	0°♎		
	-2542 Apr 14 j 18:26	0°♎				-2537 Feb 13 j 12:25	0°♎		
evening set	-2542 May 23 j 14:10	24°♎36'09				-2537 Mar 24 j 18:32	0°♎		
	-2542 Jun 01 j 02:32	0°♎				-2537 May 04 j 18:25	0°♎		
max. Earth dist.	-2542 Jul 01 j 04:17	19°♎08'07	2.66746 AU			-2537 Jun 17 j 23:11	0°♎		
						-2537 Aug 08 j 05:14	0°♎		
conjunction	-2542 Jul 09 j 04:34	24°♎15'44	1°06'33	asc. node		-2537 Sep 27 j 02:43	18°♎51'30		
minimum elong	-2542 Jul 09 j 03:47	24°♎14'28	1°06'38	retrograde		-2537 Oct 13 j 05:11	20°♎27'51		
	-2542 Jul 18 j 03:00	0°♎		min. Earth dist.		-2537 Nov 19 j 15:39	11°♎35'28	0.65207 AU	
morning rise	-2542 Aug 23 j 03:42	23°♎23'18		opposition		-2537 Nov 22 j 06:54	10°♎31'51	2°06'11	
	-2542 Sep 02 j 05:03	0°♎		greatest brilliancy		-2537 Nov 21 j 23:07	10°♎39'41	-1.4m	
	-2542 Oct 17 j 00:58	0°♎		direct		-2537 Dec 31 j 14:30	1°♎09'33		
	-2542 Nov 29 j 15:13	0°♎				-2536 Mar 27 j 06:11	0°♎		
	-2541 Jan 11 j 05:25	0°♎				-2536 May 19 j 10:58	0°♎		
desc. node	-2541 Feb 15 j 23:05	25°♎27'31				-2536 Jul 05 j 23:25	0°♎		
	-2541 Feb 22 j 08:13	0°♎				-2536 Aug 18 j 22:09	0°♎		
	-2541 Apr 06 j 04:52	0°♎		evening set		-2536 Sep 25 j 02:32	26°♎57'26		
	-2541 May 23 j 21:07	0°♎				-2536 Sep 29 j 04:36	0°♎		
retrograde	-2541 Jul 22 j 06:28	19°♎37'47		desc. node		-2536 Oct 07 j 18:48	6°♎26'49		
min. Earth dist.	-2541 Aug 18 j 19:28	14°♎28'39	0.44670 AU	max. Earth dist.		-2536 Oct 20 j 16:17	16°♎14'00	2.39627 AU	
greatest brilliancy	-2541 Aug 24 j 22:56	12°♎24'29	-2.4m			-2536 Nov 07 j 13:33	0°♎		
opposition	-2541 Aug 26 j 20:11	11°♎45'59	-5°-24'-4						
direct	-2541 Sep 28 j 00:38	5°♎22'02		conjunction		-2536 Nov 22 j 23:05	11°♎59'20	0°-31'-7	
	-2541 Dec 11 j 17:37	0°♎		minimum elong		-2536 Nov 22 j 20:48	11°♎54'51	0°31'09	
asc. node	-2541 Dec 23 j 02:53	6°♎00'48				-2536 Dec 15 j 21:38	0°♎		
	-2540 Feb 03 j 10:02	0°♎				-2535 Jan 23 j 02:13	0°♎		

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 37

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

morning rise	-2535 Jan 28 j 23:26	4°☾35'20		desc. node	-2530 May 30 j 15:26	1°☿31'52	
	-2535 Mar 03 j 00:27	0°≈			-2530 Jul 21 j 12:56	0°♊	
	-2535 Apr 12 j 12:24	0°♋			-2530 Sep 02 j 17:50	0°♌	
	-2535 May 25 j 08:43	0°♍			-2530 Oct 12 j 21:46	0°♎	
	-2535 Jul 10 j 13:02	0°♏			-2530 Nov 21 j 11:39	0°♐	
asc. node	-2535 Aug 14 j 02:17	20°♑26'16			-2530 Dec 31 j 18:39	0°≈	
	-2535 Aug 31 j 20:36	0°♒			-2529 Feb 11 j 13:46	0°♋	
retrograde	-2535 Nov 15 j 21:33	24°♓25'18		evening set	-2529 Mar 27 j 19:10	0°♑23'35	
opposition	-2535 Dec 25 j 14:05	14°♓54'28	4°05'16		-2529 Mar 27 j 05:09	0°♑	
greatest brilliancy	-2535 Dec 25 j 17:22	14°♓51'11	-1.2m	asc. node	-2529 Apr 05 j 21:54	6°♑30'05	
min. Earth dist.	-2535 Dec 26 j 18:13	14°♓26'24	0.67246 AU		-2529 May 11 j 14:11	0°♏	
direct	-2534 Feb 04 j 12:38	4°♓59'17					
	-2534 Apr 23 j 13:49	0°♐		conjunction	-2529 May 17 j 23:24	4°♏08'48	0°23'42
	-2534 Jun 14 j 14:42	0°♑		minimum elong	-2529 May 17 j 22:29	4°♏07'18	0°23'43
	-2534 Jul 29 j 20:44	0°♒		max. Earth dist.	-2529 May 30 j 00:17	11°♏55'38	2.64732 AU
desc. node	-2534 Aug 25 j 17:15	19°♒08'00			-2529 Jun 27 j 05:17	0°♓	
	-2534 Sep 09 j 11:15	0°♊		morning rise	-2529 Jul 04 j 13:53	4°♓41'09	
	-2534 Oct 18 j 20:00	0°♋			-2529 Aug 13 j 12:45	0°♐	
	-2534 Nov 26 j 01:50	0°♌			-2529 Sep 30 j 05:19	0°♑	
evening set	-2534 Nov 27 j 15:06	1°♌13'31			-2529 Nov 17 j 15:54	0°♒	
	-2533 Jan 03 j 05:08	0°♐			-2528 Jan 07 j 15:20	0°♊	
					-2528 Mar 12 j 06:14	0°♋	
conjunction	-2533 Feb 01 j 21:29	22°♐57'00	-1°-6'-4	retrograde	-2528 Apr 11 j 09:23	5°♌03'24	
minimum elong	-2533 Feb 01 j 22:22	22°♐58'40	1°06'08	desc. node	-2528 Apr 16 j 15:39	4°♌52'57	
	-2533 Feb 11 j 03:57	0°≈			-2528 May 11 j 12:20	30°♌	
max. Earth dist.	-2533 Mar 23 j 08:52	29°≈45'54	2.44417 AU	opposition	-2528 May 12 j 13:04	29°♊42'20	-1°-46'-38
	-2533 Mar 23 j 16:40	0°♋		greatest brilliancy	-2528 May 13 j 01:01	29°♊33'47	-2.7m
morning rise	-2533 Apr 07 j 09:18	10°♋31'12		min. Earth dist.	-2528 May 18 j 01:26	28°♊07'55	0.39878 AU
	-2533 May 05 j 08:05	0°♍		direct	-2528 Jun 14 j 08:11	23°♊38'10	
	-2533 Jun 19 j 09:59	0°♏			-2528 Jul 16 j 03:52	0°♌	
asc. node	-2533 Jul 02 j 00:52	8°♏05'36			-2528 Sep 10 j 07:07	0°♎	
	-2533 Aug 06 j 08:47	0°♑			-2528 Oct 25 j 02:37	0°♐	
	-2533 Sep 28 j 04:11	0°♒			-2528 Dec 07 j 11:48	0°≈	
retrograde	-2533 Dec 22 j 23:16	28°♓45'59			-2527 Jan 20 j 10:11	0°♋	
opposition	-2532 Jan 30 j 05:05	20°♓03'21	4°53'12	asc. node	-2527 Feb 20 j 19:17	20°♋56'31	
greatest brilliancy	-2532 Jan 31 j 06:36	19°♓38'38	-1.4m		-2527 Mar 06 j 13:44	0°♑	
min. Earth dist.	-2532 Feb 04 j 05:18	18°♓07'05	0.62789 AU		-2527 Apr 21 j 21:55	0°♏	
direct	-2532 Mar 11 j 07:47	10°♓06'01		evening set	-2527 May 08 j 11:27	10°♏35'43	
	-2532 May 15 j 19:06	0°♑			-2527 Jun 07 j 22:28	0°♓	
	-2532 Jul 05 j 17:18	0°♒		max. Earth dist.	-2527 Jun 22 j 03:41	9°♓03'09	2.67244 AU
desc. node	-2532 Jul 12 j 15:25	4°♒34'36					
	-2532 Aug 17 j 23:34	0°♊		conjunction	-2527 Jun 24 j 18:48	10°♓43'42	0°58'55
	-2532 Sep 26 j 23:50	0°♋		minimum elong	-2527 Jun 24 j 17:38	10°♓41'51	0°58'58
	-2532 Nov 04 j 14:21	0°♌			-2527 Jul 24 j 22:13	0°♐	
	-2532 Dec 13 j 01:32	0°♍		morning rise	-2527 Aug 08 j 21:17	9°♐37'36	
	-2531 Jan 21 j 09:13	0°≈			-2527 Sep 09 j 06:30	0°♑	
evening set	-2531 Feb 02 j 12:09	9°≈01'44			-2527 Oct 24 j 16:55	0°♒	
	-2531 Mar 03 j 07:16	0°♋			-2527 Dec 08 j 07:24	0°♊	
					-2526 Jan 21 j 10:19	0°♋	
conjunction	-2531 Apr 02 j 06:36	21°♋06'06	0°-27'-6	desc. node	-2526 Mar 04 j 15:16	28°♌27'40	
minimum elong	-2531 Apr 02 j 08:03	21°♋08'36	0°27'06		-2526 Mar 06 j 23:02	0°♎	
	-2531 Apr 15 j 05:21	0°♍			-2526 Apr 24 j 00:42	0°♐	
max. Earth dist.	-2531 May 02 j 18:53	11°♍52'32	2.56825 AU	retrograde	-2526 Jun 28 j 11:25	22°♐39'32	
asc. node	-2531 May 18 j 23:59	22°♍39'22		min. Earth dist.	-2526 Jul 25 j 01:31	18°♐09'33	0.40255 AU
morning rise	-2531 May 26 j 00:54	27°♍17'07		greatest brilliancy	-2526 Jul 29 j 19:47	16°♐44'16	-2.7m
	-2531 May 30 j 04:29	0°♏		opposition	-2526 Jul 31 j 14:34	16°♐12'08	-6°-36'-1
	-2531 Jul 15 j 23:42	0°♑		direct	-2526 Aug 31 j 00:01	10°♐42'54	
	-2531 Sep 02 j 14:14	0°♒			-2526 Nov 01 j 23:25	0°≈	
	-2531 Oct 24 j 02:57	0°♑			-2526 Dec 25 j 14:04	0°♋	
	-2531 Dec 25 j 11:05	0°♒		asc. node	-2525 Jan 08 j 18:25	8°♋31'20	
retrograde	-2530 Feb 05 j 15:16	8°♒51'59			-2525 Feb 12 j 21:10	0°♑	
opposition	-2530 Mar 13 j 02:42	1°♒29'57	3°46'04		-2525 Apr 02 j 09:03	0°♏	
greatest brilliancy	-2530 Mar 14 j 17:14	0°♒55'33	-1.9m		-2525 May 20 j 11:04	0°♓	
	-2530 Mar 17 j 07:18	30°♒		evening set	-2525 Jun 15 j 20:59	16°♓40'47	
min. Earth dist.	-2530 Mar 21 j 08:00	28°♒34'49	0.52277 AU		-2525 Jul 06 j 17:13	0°♐	
direct	-2530 Apr 21 j 03:50	22°♒30'29		max. Earth dist.	-2525 Jul 15 j 22:34	5°♐56'58	2.64343 AU
	-2530 May 26 j 19:01	0°♒					

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 38

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

conjunction	-2525 Aug 01 j 03:57	16° \mathfrak{G} 30'25	1°10'35			-2520 Jul 19 j 15:41	0° \mathfrak{B}	
minimum elong	-2525 Aug 01 j 04:03	16° \mathfrak{G} 30'35	1°10'39	asc. node		-2520 Aug 30 j 17:32	22° \mathfrak{B} 59'07	
	-2525 Aug 21 j 14:37	0° \mathfrak{Q}				-2520 Sep 15 j 05:58	0° \mathfrak{H}	
morning rise	-2525 Sep 15 j 21:05	16° \mathfrak{Q} 59'49		retrograde		-2520 Nov 02 j 09:18	11° \mathfrak{H} 35'40	
	-2525 Oct 04 j 20:12	0° \mathfrak{M}		opposition		-2520 Dec 12 j 08:54	1° \mathfrak{H} 52'01	3°27'04
	-2525 Nov 16 j 10:37	0° \mathfrak{A}		greatest brilliancy		-2520 Dec 12 j 05:49	1° \mathfrak{H} 55'06	-1.3m
	-2525 Dec 27 j 16:21	0° \mathfrak{M}		min. Earth dist.		-2520 Dec 12 j 00:59	1° \mathfrak{H} 59'57	0.67220 AU
desc. node	-2524 Jan 20 j 14:51	17° \mathfrak{M} 44'40				-2520 Dec 17 j 01:32	30° \mathfrak{R} \mathfrak{B}	
	-2524 Feb 06 j 00:56	0° \mathfrak{A}		direct		-2519 Jan 21 j 20:23	22° \mathfrak{B} 06'27	
	-2524 Mar 17 j 07:26	0° \mathfrak{C}				-2519 Mar 02 j 13:15	0° \mathfrak{H}	
	-2524 Apr 27 j 21:55	0° \approx				-2519 May 04 j 13:04	0° \mathfrak{G}	
	-2524 Jun 13 j 09:40	0° \mathfrak{H}				-2519 Jun 23 j 02:02	0° \mathfrak{Q}	
retrograde	-2524 Aug 20 j 12:17	23° \mathfrak{H} 58'44				-2519 Aug 06 j 15:39	0° \mathfrak{M}	
min. Earth dist.	-2524 Sep 20 j 08:45	17° \mathfrak{H} 28'00	0.52457 AU	desc. node		-2519 Sep 11 j 10:18	25° \mathfrak{M} 49'02	
opposition	-2524 Sep 27 j 17:11	14° \mathfrak{H} 40'57	-2°-41'-56			-2519 Sep 17 j 01:20	0° \mathfrak{A}	
greatest brilliancy	-2524 Sep 26 j 17:38	15° \mathfrak{H} 03'18	-2.0m			-2519 Oct 26 j 09:09	0° \mathfrak{M}	
direct	-2524 Nov 01 j 12:58	7° \mathfrak{H} 00'42		evening set		-2519 Oct 31 j 22:48	4° \mathfrak{M} 20'06	
asc. node	-2524 Nov 25 j 18:20	10° \mathfrak{H} 23'07				-2519 Dec 03 j 14:54	0° \mathfrak{A}	
	-2523 Jan 13 j 20:54	0° \mathfrak{Y}						
	-2523 Mar 10 j 07:00	0° \mathfrak{B}		conjunction		-2518 Jan 05 j 00:15	25° \mathfrak{A} 30'48	-1°-2'-56
	-2523 Apr 29 j 22:56	0° \mathfrak{H}		minimum elong		-2518 Jan 04 j 22:13	25° \mathfrak{A} 26'47	1°03'01
	-2523 Jun 17 j 04:49	0° \mathfrak{G}				-2518 Jan 10 j 17:47	0° \mathfrak{C}	
evening set	-2523 Jul 23 j 15:09	23° \mathfrak{G} 37'50				-2518 Feb 18 j 15:22	0° \approx	
	-2523 Aug 02 j 05:04	0° \mathfrak{Q}		max. Earth dist.		-2518 Feb 18 j 13:31	29° \mathfrak{C} 56'31	2.39397 AU
max. Earth dist.	-2523 Aug 11 j 18:32	6° \mathfrak{Q} 25'36	2.56330 AU	morning rise		-2518 Mar 14 j 02:05	17° \approx 33'27	
						-2518 Mar 31 j 02:22	0° \mathfrak{H}	
conjunction	-2523 Sep 09 j 20:52	26° \mathfrak{Q} 25'30	0°51'43			-2518 May 12 j 17:30	0° \mathfrak{Y}	
minimum elong	-2523 Sep 09 j 22:25	26° \mathfrak{Q} 28'13	0°51'45			-2518 Jun 27 j 00:49	0° \mathfrak{B}	
	-2523 Sep 14 j 23:15	0° \mathfrak{M}		asc. node		-2518 Jul 18 j 17:01	13° \mathfrak{B} 37'51	
	-2523 Oct 26 j 16:05	0° \mathfrak{A}				-2518 Aug 14 j 23:21	0° \mathfrak{H}	
morning rise	-2523 Oct 30 j 11:00	2° \mathfrak{A} 47'25				-2518 Oct 11 j 05:22	0° \mathfrak{G}	
	-2523 Dec 05 j 17:51	0° \mathfrak{M}		retrograde		-2518 Dec 07 j 22:08	15° \mathfrak{G} 13'57	
desc. node	-2523 Dec 07 j 14:01	1° \mathfrak{M} 24'02		opposition		-2517 Jan 15 j 21:02	6° \mathfrak{G} 09'19	4°44'08
	-2522 Jan 13 j 19:23	0° \mathfrak{A}		greatest brilliancy		-2517 Jan 16 j 13:20	5° \mathfrak{G} 53'18	-1.3m
	-2522 Feb 21 j 15:17	0° \mathfrak{C}		min. Earth dist.		-2517 Jan 19 j 09:26	4° \mathfrak{G} 46'26	0.65331 AU
	-2522 Apr 02 j 04:05	0° \approx				-2517 Feb 01 j 17:16	30° \mathfrak{R} \mathfrak{H}	
	-2522 May 13 j 15:34	0° \mathfrak{H}		direct		-2517 Feb 26 j 03:15	26° \mathfrak{H} 08'06	
	-2522 Jun 28 j 06:10	0° \mathfrak{Y}				-2517 Mar 24 j 12:03	0° \mathfrak{G}	
	-2522 Aug 26 j 18:16	0° \mathfrak{B}				-2517 May 29 j 14:01	0° \mathfrak{Q}	
retrograde	-2522 Sep 29 j 08:24	6° \mathfrak{B} 31'00				-2517 Jul 16 j 03:42	0° \mathfrak{M}	
asc. node	-2522 Oct 13 j 17:44	5° \mathfrak{B} 04'09		desc. node		-2517 Jul 30 j 09:50	9° \mathfrak{M} 48'25	
	-2522 Oct 30 j 13:20	30° \mathfrak{R} \mathfrak{Y}				-2517 Aug 27 j 12:05	0° \mathfrak{A}	
min. Earth dist.	-2522 Nov 04 j 04:20	28° \mathfrak{Y} 11'32	0.62708 AU			-2517 Oct 06 j 03:35	0° \mathfrak{M}	
opposition	-2522 Nov 08 j 06:32	26° \mathfrak{Y} 33'12	1°01'18			-2517 Nov 13 j 12:47	0° \mathfrak{A}	
greatest brilliancy	-2522 Nov 08 j 00:37	26° \mathfrak{Y} 39'07	-1.5m			-2517 Dec 21 j 19:13	0° \mathfrak{C}	
direct	-2522 Dec 16 j 14:40	17° \mathfrak{Y} 31'33		evening set		-2516 Jan 09 j 09:09	14° \mathfrak{C} 22'24	
	-2521 Feb 06 j 04:23	0° \mathfrak{B}				-2516 Jan 29 j 21:54	0° \approx	
	-2521 Apr 07 j 13:40	0° \mathfrak{H}				-2516 Mar 10 j 14:45	0° \mathfrak{H}	
	-2521 May 28 j 12:09	0° \mathfrak{G}						
	-2521 Jul 14 j 08:40	0° \mathfrak{Q}		conjunction		-2516 Mar 11 j 23:03	0° \mathfrak{H} 58'04	0°-46'-41
	-2521 Aug 27 j 03:38	0° \mathfrak{M}		minimum elong		-2516 Mar 12 j 01:25	1° \mathfrak{H} 02'20	0°46'44
evening set	-2521 Sep 05 j 20:39	6° \mathfrak{M} 54'20		max. Earth dist.		-2516 Apr 19 j 18:16	28° \mathfrak{H} 13'00	2.52396 AU
max. Earth dist.	-2521 Sep 21 j 20:47	18° \mathfrak{M} 29'10	2.44348 AU			-2516 Apr 22 j 08:42	0° \mathfrak{Y}	
	-2521 Oct 07 j 11:20	0° \mathfrak{A}		morning rise		-2516 May 08 j 11:35	10° \mathfrak{Y} 56'05	
desc. node	-2521 Oct 25 j 11:48	13° \mathfrak{A} 32'51		asc. node		-2516 Jun 04 j 14:53	28° \mathfrak{Y} 55'02	
						-2516 Jun 06 j 06:42	0° \mathfrak{B}	
conjunction	-2521 Oct 30 j 13:54	17° \mathfrak{A} 24'56	0°-3'-32			-2516 Jul 23 j 08:19	0° \mathfrak{H}	
minimum elong	-2521 Oct 30 j 13:39	17° \mathfrak{A} 24'28	0°03'33			-2516 Sep 10 j 23:21	0° \mathfrak{G}	
behind sun begin	-2521 Oct 29 j 13:28	16° \mathfrak{A} 38'26				-2516 Nov 05 j 03:16	0° \mathfrak{Q}	
behind sun end	-2521 Oct 31 j 13:50	18° \mathfrak{A} 10'33		retrograde		-2515 Jan 17 j 06:02	22° \mathfrak{Q} 16'28	
	-2521 Nov 15 j 23:31	0° \mathfrak{M}		opposition		-2515 Feb 23 j 00:14	14° \mathfrak{Q} 17'27	4°32'00
	-2521 Dec 24 j 10:54	0° \mathfrak{A}		greatest brilliancy		-2515 Feb 24 j 13:19	13° \mathfrak{Q} 42'53	-1.7m
morning rise	-2521 Dec 31 j 18:17	5° \mathfrak{A} 44'03		min. Earth dist.		-2515 Mar 02 j 04:05	11° \mathfrak{Q} 37'56	0.57043 AU
	-2520 Jan 31 j 17:58	0° \mathfrak{C}		direct		-2515 Apr 04 j 05:56	4° \mathfrak{Q} 44'13	
	-2520 Mar 10 j 17:47	0° \approx		desc. node		-2515 Jun 16 j 08:39	29° \mathfrak{Q} 56'22	
	-2520 Apr 20 j 07:39	0° \mathfrak{H}				-2515 Jun 16 j 11:12	0° \mathfrak{M}	
	-2520 Jun 02 j 10:38	0° \mathfrak{Y}				-2515 Aug 02 j 10:30	0° \mathfrak{A}	

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2515 Sep 12 j 17:55	0°♄		conjunction	-2510 Jul 17 j 12:12	2°♄33'58	1°09'15
	-2515 Oct 22 j 00:44	0°♂		minimum elong	-2510 Jul 17 j 11:42	2°♄33'10	1°09'19
	-2515 Nov 30 j 00:03	0°♄			-2510 Aug 28 j 12:41	0°♂	
	-2514 Jan 08 j 18:45	0°♂		morning rise	-2510 Aug 31 j 14:25	2°♂02'08	
	-2514 Feb 19 j 02:56	0°♂			-2510 Oct 12 j 03:13	0°♄	
evening set	-2514 Mar 08 j 17:24	12°♂22'11			-2510 Nov 24 j 08:04	0°♄	
	-2514 Apr 03 j 09:27	0°♂			-2509 Jan 05 j 09:01	0°♄	
asc. node	-2514 Apr 22 j 13:36	12°♂53'03		desc. node	-2509 Feb 06 j 07:39	23°♄09'51	
					-2509 Feb 15 j 17:06	0°♂	
conjunction	-2514 May 01 j 09:39	18°♂44'53	0°05'11		-2509 Mar 29 j 07:22	0°♄	
minimum elong	-2514 May 01 j 09:24	18°♂44'28	0°05'12		-2509 May 12 j 11:54	0°♂	
behind sun begin	-2514 Apr 30 j 13:03	18°♂10'49			-2509 Jul 11 j 19:13	0°♂	
behind sun end	-2514 May 02 j 05:45	19°♂18'05		retrograde	-2509 Aug 02 j 23:13	3°♂19'15	
	-2514 May 18 j 12:41	0°♂			-2509 Aug 24 j 10:37	30°♂	
max. Earth dist.	-2514 May 20 j 05:19	1°♂06'14	2.62248 AU	min. Earth dist.	-2509 Aug 31 j 15:32	27°♂40'59	0.47424 AU
morning rise	-2514 Jun 19 j 21:53	20°♂55'25		greatest brilliancy	-2509 Sep 07 j 00:55	25°♂24'43	-2.2m
	-2514 Jul 04 j 03:19	0°♂		opposition	-2509 Sep 08 j 16:06	24°♂49'38	-4°-26'-46
	-2514 Aug 20 j 18:49	0°♄		direct	-2509 Oct 11 j 19:04	17°♂56'17	
	-2514 Oct 08 j 11:14	0°♂			-2509 Nov 29 j 13:04	0°♂	
	-2514 Nov 28 j 10:51	0°♄		asc. node	-2509 Dec 13 j 09:22	6°♂13'05	
	-2513 Jan 27 j 18:16	0°♄			-2508 Jan 27 j 14:23	0°♂	
retrograde	-2513 Mar 14 j 15:05	10°♄25'07			-2508 Mar 19 j 02:15	0°♂	
opposition	-2513 Apr 16 j 10:22	4°♄16'22	1°06'22		-2508 May 07 j 11:03	0°♂	
greatest brilliancy	-2513 Apr 17 j 00:26	4°♄05'12	-2.4m		-2508 Jun 24 j 05:13	0°♄	
min. Earth dist.	-2513 Apr 24 j 11:41	1°♄43'22	0.44247 AU	evening set	-2508 Jul 08 j 05:26	9°♄01'14	
	-2513 Apr 30 j 09:47	30°♄		max. Earth dist.	-2508 Jul 31 j 03:09	24°♄01'08	2.60026 AU
desc. node	-2513 May 04 j 07:35	29°♄01'04			-2508 Aug 09 j 03:00	0°♂	
direct	-2513 May 22 j 06:42	26°♄51'02					
	-2513 Jun 13 j 02:39	0°♄		conjunction	-2508 Aug 24 j 06:51	10°♂12'20	1°03'11
	-2513 Aug 12 j 17:32	0°♄		minimum elong	-2508 Aug 24 j 07:57	10°♂14'12	1°03'14
	-2513 Sep 25 j 17:07	0°♂			-2508 Sep 22 j 00:29	0°♄	
	-2513 Nov 06 j 06:19	0°♄		morning rise	-2508 Oct 11 j 07:22	13°♄37'25	
	-2513 Dec 17 j 21:53	0°♂			-2508 Nov 03 j 00:08	0°♄	
	-2512 Jan 29 j 17:18	0°♂			-2508 Dec 13 j 10:47	0°♄	
asc. node	-2512 Mar 09 j 12:27	26°♂56'41		desc. node	-2508 Dec 24 j 06:32	8°♄10'38	
	-2512 Mar 14 j 02:42	0°♂			-2507 Jan 21 j 21:39	0°♂	
evening set	-2512 Apr 22 j 15:38	25°♂54'52			-2507 Mar 02 j 02:54	0°♄	
	-2512 Apr 28 j 23:14	0°♂			-2507 Apr 11 j 03:06	0°♂	
					-2507 May 23 j 12:26	0°♂	
conjunction	-2512 Jun 10 j 02:42	27°♂01'55	0°47'43		-2507 Jul 11 j 04:30	0°♂	
minimum elong	-2512 Jun 10 j 01:24	26°♂59'51	0°47'45	retrograde	-2507 Sep 14 j 19:08	21°♂29'16	
max. Earth dist.	-2512 Jun 12 j 23:09	28°♂51'08	2.66897 AU	min. Earth dist.	-2507 Oct 18 j 19:33	13°♂48'07	0.59292 AU
	-2512 Jun 14 j 18:18	0°♂		opposition	-2507 Oct 24 j 07:35	11°♂37'29	0°-15'-29
morning rise	-2512 Jul 25 j 20:10	26°♂11'41		greatest brilliancy	-2507 Oct 26 j 11:12	10°♂46'48	-1.7m
	-2512 Jul 31 j 19:09	0°♄		asc. node	-2507 Oct 30 j 09:28	9°♂16'57	
	-2512 Sep 16 j 12:38	0°♂		direct	-2507 Nov 30 j 10:58	3°♂02'13	
	-2512 Nov 01 j 19:13	0°♄			-2506 Feb 20 j 22:27	0°♂	
	-2512 Dec 17 j 21:48	0°♄			-2506 Apr 16 j 13:12	0°♂	
	-2511 Feb 02 j 17:15	0°♄			-2506 Jun 05 j 02:56	0°♄	
desc. node	-2511 Mar 21 j 08:04	27°♄49'59			-2506 Jul 21 j 13:18	0°♂	
	-2511 Mar 25 j 07:32	0°♂		evening set	-2506 Aug 18 j 12:57	18°♂59'42	
retrograde	-2511 May 31 j 04:07	22°♂10'30		max. Earth dist.	-2506 Sep 02 j 17:51	29°♂36'44	2.49331 AU
min. Earth dist.	-2511 Jun 28 j 16:41	17°♂32'10	0.37772 AU		-2506 Sep 03 j 07:02	0°♄	
greatest brilliancy	-2511 Jun 30 j 09:37	17°♂04'32	-2.8m				
opposition	-2511 Jul 01 j 01:32	16°♂53'45	-6°-11'-34	conjunction	-2506 Oct 09 j 00:36	25°♄47'09	0°22'05
direct	-2511 Jul 30 j 20:36	11°♂55'34		minimum elong	-2506 Oct 09 j 01:47	25°♄49'19	0°22'04
	-2511 Sep 27 j 23:22	0°♄			-2506 Oct 14 j 17:24	0°♄	
	-2511 Nov 18 j 22:35	0°♂		desc. node	-2506 Nov 11 j 05:59	20°♄41'46	
	-2510 Jan 05 j 09:51	0°♂			-2506 Nov 23 j 09:54	0°♄	
asc. node	-2510 Jan 25 j 10:15	12°♂46'45		morning rise	-2506 Dec 04 j 21:39	8°♄51'45	
	-2510 Feb 21 j 11:04	0°♂			-2505 Jan 01 j 01:33	0°♂	
	-2510 Apr 09 j 20:58	0°♂			-2505 Feb 08 j 12:03	0°♄	
	-2510 May 27 j 10:27	0°♂			-2505 Mar 19 j 14:49	0°♂	
evening set	-2510 Jun 01 j 02:59	2°♂58'02			-2505 Apr 29 j 09:06	0°♂	
max. Earth dist.	-2510 Jul 06 j 13:53	25°♂32'22	2.66104 AU		-2505 Jun 12 j 00:36	0°♂	
	-2510 Jul 13 j 12:34	0°♄			-2505 Jul 31 j 03:35	0°♂	
				asc. node	-2505 Sep 17 j 08:24	22°♂18'49	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 40

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

retrograde	-2505 Oct 20 j 23:38	28°♄35'25			-2500 Oct 30 j 11:36	0°♄	
min. Earth dist.	-2505 Nov 28 j 06:36	19°♄26'32	0.66210 AU		-2500 Dec 08 j 01:52	0°♄	
opposition	-2505 Nov 30 j 02:16	18°♄42'38	2°38'58		-2499 Jan 16 j 12:21	0°♄	
greatest brilliancy	-2505 Nov 29 j 19:14	18°♄49'42	-1.3m	evening set	-2499 Feb 15 j 13:53	22°♄07'14	
direct	-2504 Jan 08 j 21:44	9°♄10'49			-2499 Feb 26 j 12:47	0°♄	
	-2504 Mar 19 j 08:57	0°♄			-2499 Apr 10 j 12:45	0°♄	
	-2504 May 13 j 20:11	0°♄					
	-2504 Jun 30 j 23:40	0°♄		conjunction	-2499 Apr 13 j 08:51	1°♄55'50	0°-15'-10
	-2504 Aug 14 j 03:51	0°♄		minimum elong	-2499 Apr 13 j 09:38	1°♄57'10	0°15'10
	-2504 Sep 24 j 11:49	0°♄		behind sun begin	-2499 Apr 13 j 03:20	1°♄46'29	
desc. node	-2504 Sep 28 j 04:13	2°♄45'13		behind sun end	-2499 Apr 13 j 15:55	2°♄07'51	
evening set	-2504 Oct 07 j 14:05	9°♄50'40		asc. node	-2499 May 09 j 05:42	19°♄17'19	
	-2504 Nov 02 j 20:44	0°♄		max. Earth dist.	-2499 May 09 j 13:28	19°♄30'11	2.58977 AU
max. Earth dist.	-2504 Nov 19 j 20:03	13°♄14'01	2.37788 AU		-2499 May 25 j 12:11	0°♄	
				morning rise	-2499 Jun 04 j 09:53	6°♄26'57	
conjunction	-2504 Dec 07 j 21:27	27°♄25'25	0°-45'-23		-2499 Jul 11 j 04:27	0°♄	
minimum elong	-2504 Dec 07 j 18:26	27°♄19'29	0°45'26		-2499 Aug 28 j 08:13	0°♄	
	-2504 Dec 11 j 03:55	0°♄			-2499 Oct 17 j 13:02	0°♄	
	-2503 Jan 18 j 07:23	0°♄			-2499 Dec 12 j 11:36	0°♄	
morning rise	-2503 Feb 14 j 10:44	21°♄02'23		retrograde	-2498 Feb 17 j 22:24	19°♄43'27	
	-2503 Feb 26 j 04:31	0°♄		opposition	-2498 Mar 24 j 13:30	12°♄45'27	3°02'09
	-2503 Apr 07 j 14:44	0°♄		greatest brilliancy	-2498 Mar 26 j 00:00	12°♄15'42	-2.1m
	-2503 May 20 j 07:14	0°♄		min. Earth dist.	-2498 Apr 02 j 02:12	9°♄49'46	0.49447 AU
	-2503 Jul 05 j 00:25	0°♄		direct	-2498 May 01 j 17:08	4°♄13'01	
asc. node	-2503 Aug 04 j 07:15	18°♄27'04		desc. node	-2498 May 21 j 00:35	6°♄38'24	
	-2503 Aug 24 j 15:02	0°♄			-2498 Jul 12 j 07:40	0°♄	
	-2503 Nov 03 j 23:51	0°♄			-2498 Aug 26 j 19:34	0°♄	
retrograde	-2503 Nov 23 j 18:29	2°♄14'26			-2498 Oct 06 j 20:11	0°♄	
	-2503 Dec 12 j 06:42	30°♄11'22			-2498 Nov 15 j 21:45	0°♄	
opposition	-2502 Jan 02 j 06:23	22°♄51'52	4°22'43		-2498 Dec 26 j 13:11	0°♄	
greatest brilliancy	-2502 Jan 02 j 13:59	22°♄44'19	-1.3m		-2497 Feb 06 j 14:35	0°♄	
min. Earth dist.	-2502 Jan 04 j 06:35	22°♄04'02	0.66846 AU		-2497 Mar 22 j 10:42	0°♄	
direct	-2502 Feb 12 j 09:46	12°♄53'09		asc. node	-2497 Mar 27 j 03:34	3°♄08'54	
	-2502 Apr 14 j 23:18	0°♄		evening set	-2497 Apr 06 j 21:49	10°♄18'30	
	-2502 Jun 08 j 17:31	0°♄			-2497 May 06 j 22:36	0°♄	
	-2502 Jul 24 j 15:59	0°♄					
desc. node	-2502 Aug 16 j 02:09	15°♄48'04		conjunction	-2497 May 26 j 23:23	12°♄56'49	0°33'21
	-2502 Sep 04 j 12:17	0°♄		minimum elong	-2497 May 26 j 22:14	12°♄54'57	0°33'22
	-2502 Oct 13 j 23:26	0°♄		max. Earth dist.	-2497 Jun 04 j 14:15	18°♄29'05	2.65735 AU
	-2502 Nov 21 j 06:15	0°♄			-2497 Jun 22 j 14:23	0°♄	
greatest brilliancy	-2502 Dec 12 j 10:23	16°♄40'44	1.2m	morning rise	-2497 Jul 12 j 18:38	12°♄51'03	
evening set	-2502 Dec 13 j 04:17	17°♄15'55			-2497 Aug 08 j 18:34	0°♄	
	-2502 Dec 29 j 10:14	0°♄			-2497 Sep 25 j 01:10	0°♄	
	-2501 Feb 06 j 09:47	0°♄			-2497 Nov 11 j 12:42	0°♄	
					-2497 Dec 30 j 02:54	0°♄	
conjunction	-2501 Feb 16 j 17:50	7°♄46'39	-1°-1'-42		-2496 Feb 21 j 04:25	0°♄	
minimum elong	-2501 Feb 16 j 19:51	7°♄50'25	1°01'44	desc. node	-2496 Apr 06 j 23:30	18°♄29'32	
	-2501 Mar 18 j 22:56	0°♄		retrograde	-2496 Apr 29 j 08:28	21°♄26'16	
max. Earth dist.	-2501 Apr 04 j 08:54	11°♄44'21	2.47342 AU	opposition	-2496 May 29 j 19:27	16°♄22'23	-3°-39'-1
morning rise	-2501 Apr 19 j 17:41	22°♄31'02		greatest brilliancy	-2496 May 30 j 06:46	16°♄14'44	-2.8m
	-2501 Apr 30 j 13:57	0°♄		min. Earth dist.	-2496 Jun 01 j 21:14	15°♄32'35	0.38319 AU
	-2501 Jun 14 j 12:39	0°♄		direct	-2496 Jun 29 j 23:19	10°♄57'23	
asc. node	-2501 Jun 22 j 07:13	5°♄01'42			-2496 Aug 28 j 13:41	0°♄	
	-2501 Aug 01 j 00:53	0°♄			-2496 Oct 16 j 22:54	0°♄	
	-2501 Sep 21 j 07:05	0°♄			-2496 Dec 01 j 00:20	0°♄	
	-2501 Nov 24 j 04:40	0°♄			-2495 Jan 14 j 20:00	0°♄	
retrograde	-2500 Jan 01 j 01:17	7°♄17'04		asc. node	-2495 Feb 11 j 02:02	17°♄59'05	
	-2500 Feb 04 j 16:35	30°♄08'28			-2495 Mar 01 j 12:02	0°♄	
opposition	-2500 Feb 07 j 20:17	28°♄48'15	4°50'56		-2495 Apr 17 j 03:26	0°♄	
greatest brilliancy	-2500 Feb 09 j 02:34	28°♄19'15	-1.5m	evening set	-2495 May 17 j 04:49	19°♄07'28	
min. Earth dist.	-2500 Feb 13 j 15:57	26°♄34'50	0.61001 AU		-2495 Jun 03 j 07:48	0°♄	
direct	-2500 Mar 19 j 18:32	18°♄56'24		max. Earth dist.	-2495 Jun 27 j 11:44	15°♄22'41	2.67075 AU
	-2500 May 04 j 19:33	0°♄					
	-2500 Jun 29 j 03:03	0°♄		conjunction	-2495 Jul 03 j 01:14	18°♄55'46	1°03'48
desc. node	-2500 Jul 03 j 01:06	2°♄29'50		minimum elong	-2495 Jul 03 j 00:16	18°♄54'13	1°03'51
	-2500 Aug 12 j 07:36	0°♄			-2495 Jul 20 j 08:01	0°♄	
	-2500 Sep 21 j 16:38	0°♄		morning rise	-2495 Aug 17 j 00:25	17°♄53'26	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 41

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2495 Sep 04 j 13:07	0°♈		min. Earth dist.	-2490 Nov 13 j 02:48	6°♌26'07	0.64204 AU
	-2495 Oct 19 j 15:46	0°♍		opposition	-2490 Nov 16 j 10:02	5°♌06'37	1°40'31
	-2495 Dec 02 j 16:13	0°♊		greatest brilliancy	-2490 Nov 16 j 02:21	5°♌14'20	-1.4m
	-2494 Jan 14 j 21:02	0°♋			-2490 Nov 30 j 04:27	30°♋♎	
desc. node	-2494 Feb 23 j 00:46	27°♋21'08		direct	-2490 Dec 25 j 08:19	25°♎52'53	
	-2494 Feb 26 j 20:14	0°♌			-2489 Jan 21 j 23:03	0°♏	
	-2494 Apr 12 j 05:30	0°♍			-2489 Apr 01 j 00:53	0°♐	
	-2494 Jun 04 j 19:00	0°♎			-2489 May 23 j 05:42	0°♑	
retrograde	-2494 Jul 12 j 12:22	8°♎53'25			-2489 Jul 09 j 12:25	0°♒	
min. Earth dist.	-2494 Aug 08 j 09:29	4°♎04'50	0.42551 AU		-2489 Aug 22 j 10:58	0°♓	
greatest brilliancy	-2494 Aug 14 j 02:10	2°♎15'28	-2.5m	evening set	-2489 Sep 17 j 01:22	18°♓23'18	
opposition	-2494 Aug 16 j 00:51	1°♎37'41	-6°-2'-22		-2489 Oct 02 j 18:57	0°♈	
	-2494 Aug 21 j 05:01	30°♋♏		max. Earth dist.	-2489 Oct 06 j 04:16	2°♈31'44	2.41632 AU
direct	-2494 Sep 16 j 10:05	25°♏38'43		desc. node	-2489 Oct 15 j 20:52	9°♈48'51	
	-2494 Oct 13 j 12:04	0°♎			-2489 Nov 11 j 06:03	0°♋	
	-2494 Dec 17 j 11:29	0°♌					
asc. node	-2494 Dec 30 j 00:30	7°♌06'00		conjunction	-2489 Nov 12 j 23:17	1°♋19'45	0°-19'-16
	-2493 Feb 06 j 20:58	0°♎		minimum elong	-2489 Nov 12 j 21:52	1°♋17'01	0°19'17
	-2493 Mar 28 j 05:01	0°♏			-2489 Dec 19 j 15:46	0°♌	
	-2493 May 15 j 16:32	0°♐		morning rise	-2488 Jan 17 j 01:23	22°♌18'59	
evening set	-2493 Jun 24 j 07:36	25°♐00'45			-2488 Jan 26 j 21:03	0°♍	
	-2493 Jul 02 j 02:35	0°♑			-2488 Mar 05 j 19:13	0°♎	
max. Earth dist.	-2493 Jul 21 j 16:44	12°♑40'05	2.63035 AU		-2488 Apr 15 j 06:39	0°♏	
					-2488 May 28 j 03:42	0°♎	
conjunction	-2493 Aug 09 j 17:27	25°♑09'46	1°09'17		-2488 Jul 13 j 14:40	0°♏	
minimum elong	-2493 Aug 09 j 17:56	25°♑10'33	1°09'20	asc. node	-2488 Aug 20 j 23:43	22°♏07'29	
	-2493 Aug 17 j 00:15	0°♒			-2488 Sep 05 j 09:36	0°♐	
morning rise	-2493 Sep 25 j 01:07	26°♒28'39		retrograde	-2488 Nov 10 j 02:48	19°♐25'28	
	-2493 Sep 30 j 03:13	0°♓		opposition	-2488 Dec 19 j 23:33	9°♐48'30	3°50'29
	-2493 Nov 11 j 12:20	0°♈		greatest brilliancy	-2488 Dec 19 j 23:44	9°♐48'18	-1.2m
	-2493 Dec 22 j 10:51	0°♋		min. Earth dist.	-2488 Dec 20 j 11:27	9°♐36'35	0.67359 AU
desc. node	-2492 Jan 11 j 00:42	14°♋37'46			-2487 Jan 27 j 00:15	30°♋♏	
	-2492 Jan 31 j 10:32	0°♌		direct	-2487 Jan 29 j 18:25	29°♏57'10	
	-2492 Mar 11 j 05:33	0°♍			-2487 Feb 01 j 13:15	0°♐	
	-2492 Apr 21 j 00:58	0°♎			-2487 Apr 27 j 17:14	0°♑	
	-2492 Jun 04 j 06:21	0°♏			-2487 Jun 17 j 15:39	0°♒	
	-2492 Aug 02 j 09:31	0°♎			-2487 Aug 01 j 16:01	0°♓	
retrograde	-2492 Aug 30 j 03:36	4°♎53'16		desc. node	-2487 Sep 01 j 19:44	22°♓18'12	
	-2492 Sep 25 j 12:32	30°♋♏			-2487 Sep 12 j 05:33	0°♈	
min. Earth dist.	-2492 Oct 01 j 03:59	27°♏56'15	0.55062 AU		-2487 Oct 21 j 14:41	0°♋	
opposition	-2492 Oct 07 j 22:59	25°♏18'46	-1°-44'-51	evening set	-2487 Nov 15 j 17:41	19°♋39'24	
greatest brilliancy	-2492 Oct 07 j 08:24	25°♏32'51	-1.8m		-2487 Nov 28 j 20:39	0°♌	
direct	-2492 Nov 12 j 16:14	17°♏16'41			-2486 Jan 05 j 23:16	0°♍	
asc. node	-2492 Nov 15 j 23:33	17°♏20'50					
	-2491 Jan 03 j 00:44	0°♎		conjunction	-2486 Jan 20 j 21:09	11°♏36'31	-1°-6'-31
	-2491 Mar 03 j 22:58	0°♏		minimum elong	-2486 Jan 20 j 20:46	11°♏35'46	1°06'36
	-2491 Apr 24 j 17:43	0°♐			-2486 Feb 13 j 20:39	0°♎	
	-2491 Jun 12 j 09:49	0°♑		max. Earth dist.	-2486 Mar 11 j 16:58	19°♎20'05	2.42058 AU
	-2491 Jul 28 j 13:42	0°♒			-2486 Mar 26 j 07:19	0°♏	
evening set	-2491 Aug 01 j 18:26	2°♒48'32		morning rise	-2486 Mar 28 j 05:48	1°♏24'03	
max. Earth dist.	-2491 Aug 19 j 02:26	14°♒33'35	2.53993 AU		-2486 May 07 j 20:58	0°♎	
	-2491 Sep 10 j 08:07	0°♓			-2486 Jun 21 j 23:16	0°♏	
				asc. node	-2486 Jul 08 j 22:25	10°♏48'43	
conjunction	-2491 Sep 19 j 22:16	6°♓47'16	0°42'32		-2486 Aug 09 j 05:04	0°♐	
minimum elong	-2491 Sep 19 j 23:53	6°♓50'09	0°42'33		-2486 Oct 02 j 08:29	0°♑	
	-2491 Oct 21 j 22:54	0°♈		retrograde	-2486 Dec 16 j 09:31	23°♑21'26	
morning rise	-2491 Nov 11 j 09:43	15°♈13'47		opposition	-2485 Jan 24 j 00:07	14°♑28'22	4°50'47
desc. node	-2491 Nov 27 j 22:43	27°♈45'00		greatest brilliancy	-2485 Jan 24 j 21:30	14°♑07'30	-1.4m
	-2491 Nov 30 j 21:33	0°♋		min. Earth dist.	-2485 Jan 28 j 08:34	12°♑46'40	0.64048 AU
	-2490 Jan 08 j 19:31	0°♌		direct	-2485 Mar 06 j 05:52	4°♑28'31	
	-2490 Feb 16 j 11:31	0°♍			-2485 May 21 j 23:18	0°♒	
	-2490 Mar 27 j 19:36	0°♎			-2485 Jul 10 j 07:13	0°♓	
	-2490 May 07 j 22:15	0°♏		desc. node	-2485 Jul 20 j 17:52	7°♓01'59	
	-2490 Jun 21 j 12:27	0°♎			-2485 Aug 22 j 04:24	0°♈	
	-2490 Aug 13 j 19:20	0°♏			-2485 Oct 01 j 01:28	0°♋	
asc. node	-2490 Oct 03 j 23:50	14°♏59'32			-2485 Nov 08 j 13:45	0°♌	
retrograde	-2490 Oct 07 j 08:49	15°♏04'05			-2485 Dec 16 j 22:19	0°♍	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 42

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

evening set	-2484 Jan 23 j 21:01	29° $\overline{\text{C}}$ 03'45			-2480 Dec 11 j 16:30	0° $\underline{\text{A}}$	
	-2484 Jan 25 j 02:54	0° \approx			-2479 Jan 25 j 19:15	0° M	
	-2484 Mar 05 j 21:22	0° H		desc. node	-2479 Mar 11 j 17:27	29° M 06'12	
					-2479 Mar 13 j 03:53	0° J	
conjunction	-2484 Mar 24 j 08:42	13° H 08'09	0°-35'-45		-2479 May 06 j 13:59	0° $\overline{\text{C}}$	
minimum elong	-2484 Mar 24 j 10:38	13° H 11'32	0°35'46	retrograde	-2479 Jun 16 j 16:13	10° $\overline{\text{C}}$ 00'59	
	-2484 Apr 17 j 16:08	0° Y		min. Earth dist.	-2479 Jul 13 j 15:59	5° $\overline{\text{C}}$ 35'22	0.38820 AU
max. Earth dist.	-2484 Apr 27 j 13:19	6° Y 43'28	2.54925 AU	greatest brilliancy	-2479 Jul 17 j 06:47	4° $\overline{\text{C}}$ 33'57	-2.8m
morning rise	-2484 May 18 j 17:00	20° Y 53'16		opposition	-2479 Jul 18 j 16:13	4° $\overline{\text{C}}$ 10'12	-6°-41'-40
asc. node	-2484 May 25 j 21:42	25° Y 38'13			-2479 Aug 05 j 06:13	30° R J	
	-2484 Jun 01 j 13:22	0° B		direct	-2479 Aug 17 j 12:39	29° J 00'09	
	-2484 Jul 18 j 09:55	0° II			-2479 Aug 30 j 00:49	0° $\overline{\text{C}}$	
	-2484 Sep 05 j 08:36	0° $\overline{\text{C}}$			-2479 Nov 09 j 15:07	0° \approx	
	-2484 Oct 28 j 01:49	0° Ω			-2479 Dec 29 j 19:11	0° H	
	-2483 Jan 09 j 14:38	0° M		asc. node	-2478 Jan 15 j 15:59	10° H 27'56	
retrograde	-2483 Jan 27 j 22:12	1° M 54'47			-2478 Feb 15 j 22:37	0° Y	
	-2483 Feb 14 j 08:15	30° R Ω			-2478 Apr 04 j 21:40	0° B	
opposition	-2483 Mar 05 j 00:40	24° Ω 15'18	4°09'11		-2478 May 22 j 17:54	0° II	
greatest brilliancy	-2483 Mar 06 j 15:27	23° Ω 39'56	-1.8m	evening set	-2478 Jun 09 j 14:27	11° II 16'54	
min. Earth dist.	-2483 Mar 12 j 20:35	21° Ω 24'50	0.54482 AU		-2478 Jul 08 j 22:33	0° $\overline{\text{C}}$	
direct	-2483 Apr 13 j 16:58	14° Ω 58'30		max. Earth dist.	-2478 Jul 12 j 01:19	2° $\overline{\text{C}}$ 00'16	2.65238 AU
	-2483 Jun 05 j 20:19	0° M					
desc. node	-2483 Jun 06 j 17:07	0° M 25'35		conjunction	-2478 Jul 25 j 20:52	10° $\overline{\text{C}}$ 56'22	1°10'33
	-2483 Jul 26 j 10:47	0° $\underline{\text{A}}$		minimum elong	-2478 Jul 25 j 20:42	10° $\overline{\text{C}}$ 56'07	1°10'36
	-2483 Sep 06 j 17:00	0° M			-2478 Aug 23 j 21:50	0° Ω	
	-2483 Oct 16 j 10:41	0° J		morning rise	-2478 Sep 09 j 05:31	10° Ω 53'45	
	-2483 Nov 24 j 16:57	0° $\overline{\text{C}}$			-2478 Oct 07 j 08:02	0° M	
	-2482 Jan 03 j 17:18	0° \approx			-2478 Nov 19 j 05:13	0° $\underline{\text{A}}$	
	-2482 Feb 14 j 06:12	0° H			-2478 Dec 30 j 19:19	0° M	
evening set	-2482 Mar 19 j 19:24	23° H 17'45		desc. node	-2477 Jan 27 j 16:52	20° M 29'58	
	-2482 Mar 29 j 16:16	0° Y			-2477 Feb 09 j 13:28	0° J	
asc. node	-2482 Apr 12 j 19:53	9° Y 30'23			-2477 Mar 22 j 07:14	0° $\overline{\text{C}}$	
					-2477 May 03 j 17:04	0° \approx	
conjunction	-2482 May 11 j 00:17	28° Y 06'53	0°16'09		-2477 Jun 21 j 22:52	0° H	
minimum elong	-2482 May 10 j 23:37	28° Y 05'46	0°16'10	retrograde	-2477 Aug 13 j 18:51	15° H 52'23	
	-2482 May 13 j 21:35	0° B		min. Earth dist.	-2477 Sep 12 j 16:09	9° H 45'02	0.50231 AU
max. Earth dist.	-2482 May 26 j 00:57	7° B 53'20	2.63726 AU	greatest brilliancy	-2477 Sep 19 j 03:30	7° H 21'29	-2.1m
morning rise	-2482 Jun 28 j 09:22	29° B 18'07		opposition	-2477 Sep 20 j 10:13	6° H 53'01	-3°-26'-27
	-2482 Jun 29 j 11:39	0° II			-2477 Oct 16 j 07:16	30° R \approx	
	-2482 Aug 15 j 21:51	0° $\overline{\text{C}}$		direct	-2477 Oct 24 j 12:03	29° \approx 32'41	
	-2482 Oct 02 j 23:38	0° Ω			-2477 Nov 01 j 23:50	0° H	
	-2482 Nov 21 j 08:28	0° M		asc. node	-2477 Dec 03 j 15:59	8° H 03'20	
	-2481 Jan 14 j 00:05	0° $\underline{\text{A}}$			-2476 Jan 19 j 22:17	0° Y	
retrograde	-2481 Mar 30 j 06:27	24° $\underline{\text{A}}$ 10'01			-2476 Mar 13 j 09:21	0° B	
desc. node	-2481 Apr 24 j 17:40	20° $\underline{\text{A}}$ 19'56			-2476 May 02 j 11:08	0° II	
opposition	-2481 May 01 j 02:51	18° $\underline{\text{A}}$ 28'48	0°-25'-19		-2476 Jun 19 j 12:20	0° $\overline{\text{C}}$	
greatest brilliancy	-2481 May 01 j 06:58	18° $\underline{\text{A}}$ 25'42	-2.6m	evening set	-2476 Jul 16 j 23:25	17° $\overline{\text{C}}$ 44'19	
min. Earth dist.	-2481 May 08 j 01:43	16° $\underline{\text{A}}$ 23'51	0.41648 AU		-2476 Aug 04 j 12:32	0° Ω	
direct	-2481 Jun 04 j 07:24	11° $\underline{\text{A}}$ 47'56		max. Earth dist.	-2476 Aug 06 j 15:18	1° Ω 24'52	2.58078 AU
	-2481 Jul 31 j 12:30	0° M					
	-2481 Sep 17 j 15:02	0° J		conjunction	-2476 Sep 02 j 14:11	19° Ω 43'03	0°57'15
	-2481 Oct 30 j 15:17	0° $\overline{\text{C}}$		minimum elong	-2476 Sep 02 j 15:34	19° Ω 45'27	0°57'17
	-2481 Dec 12 j 02:13	0° \approx			-2476 Sep 17 j 09:18	0° M	
	-2480 Jan 24 j 10:24	0° H		morning rise	-2476 Oct 21 j 21:29	24° M 37'58	
asc. node	-2480 Feb 28 j 17:08	23° H 44'12			-2476 Oct 29 j 06:03	0° $\underline{\text{A}}$	
	-2480 Mar 09 j 04:15	0° Y			-2476 Dec 08 j 12:17	0° M	
	-2480 Apr 24 j 06:14	0° B		desc. node	-2476 Dec 14 j 16:10	4° M 40'19	
evening set	-2480 May 01 j 19:42	4° B 51'37			-2475 Jan 16 j 18:04	0° J	
	-2480 Jun 10 j 03:57	0° II			-2475 Feb 24 j 17:27	0° $\overline{\text{C}}$	
					-2475 Apr 05 j 09:48	0° \approx	
conjunction	-2480 Jun 18 j 13:42	5° II 21'26	0°54'38		-2475 May 17 j 03:34	0° H	
minimum elong	-2480 Jun 18 j 12:28	5° II 19'28	0°54'40		-2475 Jul 02 j 14:48	0° Y	
max. Earth dist.	-2480 Jun 18 j 07:27	5° II 11'28	2.67203 AU		-2475 Sep 13 j 00:03	0° B	
	-2480 Jul 27 j 04:02	0° $\overline{\text{C}}$		retrograde	-2475 Sep 23 j 05:55	0° B 41'51	
morning rise	-2480 Aug 02 j 21:19	4° $\overline{\text{C}}$ 18'27			-2475 Oct 03 j 05:26	30° R Y	
	-2480 Sep 11 j 16:28	0° Ω		asc. node	-2475 Oct 20 j 15:21	25° Y 33'06	
	-2480 Oct 27 j 11:32	0° M		min. Earth dist.	-2475 Oct 28 j 07:14	22° Y 39'04	0.61290 AU

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 43

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

opposition	-2475 Nov 02 j 01:01	20° Υ 45'43	0°30'39		-2470 Oct 09 j 01:11	0° \mathbb{M}	
greatest brilliancy	-2475 Nov 01 j 21:31	20° Υ 49'12	-1.6m		-2470 Nov 16 j 09:24	0° \mathcal{A}	
direct	-2475 Dec 09 j 21:28	11° Υ 55'02			-2470 Dec 24 j 14:10	0° \mathcal{Z}	
	-2474 Feb 12 j 05:19	0° \mathcal{B}		evening set	-2470 Dec 28 j 17:15	3° \mathcal{Z} 13'02	
	-2474 Apr 10 j 17:18	0° \mathbb{I}			-2469 Feb 01 j 14:27	0° \approx	
	-2474 May 31 j 01:47	0° \mathcal{S}					
	-2474 Jul 16 j 19:04	0° \mathcal{Q}		conjunction	-2469 Mar 02 j 20:19	21° \approx 45'31	0°-53'-57
evening set	-2474 Aug 28 j 18:18	29° \mathcal{Q} 23'45		minimum elong	-2469 Mar 02 j 22:46	21° \approx 50'00	0°53'58
	-2474 Aug 29 j 14:52	0° \mathbb{P}			-2469 Mar 14 j 04:28	0° \mathcal{H}	
max. Earth dist.	-2474 Sep 12 j 19:22	10° \mathbb{P} 06'08	2.46599 AU	max. Earth dist.	-2469 Apr 14 j 07:23	22° \mathcal{H} 03'03	2.50207 AU
	-2474 Oct 10 j 00:52	0° \mathcal{L}			-2469 Apr 25 j 19:37	0° Υ	
				morning rise	-2469 May 01 j 07:08	3° Υ 44'46	
conjunction	-2474 Oct 20 j 21:46	8° \mathcal{L} 07'10	0°08'00		-2469 Jun 09 j 16:30	0° \mathcal{B}	
minimum elong	-2474 Oct 20 j 22:16	8° \mathcal{L} 08'06	0°07'58	asc. node	-2469 Jun 12 j 12:32	1° \mathcal{B} 50'47	
behind sun begin	-2474 Oct 20 j 01:14	7° \mathcal{L} 28'39			-2469 Jul 26 j 20:47	0° \mathbb{I}	
behind sun end	-2474 Oct 21 j 19:17	8° \mathcal{L} 47'34			-2469 Sep 15 j 00:39	0° \mathcal{S}	
desc. node	-2474 Nov 01 j 14:05	16° \mathcal{L} 56'30			-2469 Nov 11 j 14:27	0° \mathcal{Q}	
	-2474 Nov 18 j 15:44	0° \mathbb{M}		retrograde	-2468 Jan 10 j 14:41	16° \mathcal{Q} 07'39	
morning rise	-2474 Dec 19 j 15:27	24° \mathbb{M} 04'13		opposition	-2468 Feb 16 j 21:19	7° \mathcal{Q} 54'31	4°42'15
	-2474 Dec 27 j 05:22	0° \mathcal{A}		greatest brilliancy	-2468 Feb 18 j 07:42	7° \mathcal{Q} 22'02	-1.6m
	-2473 Feb 03 j 13:39	0° \mathcal{Z}		min. Earth dist.	-2468 Feb 23 j 11:48	5° \mathcal{Q} 25'26	0.58928 AU
greatest brilliancy	-2473 Feb 03 j 18:21	0° \mathcal{Z} 09'09	1.2m		-2468 Mar 12 j 01:22	30° \mathcal{R} \mathcal{S}	
	-2473 Mar 14 j 13:52	0° \approx		direct	-2468 Mar 28 j 12:26	28° \mathcal{S} 11'26	
	-2473 Apr 24 j 04:09	0° \mathcal{H}			-2468 Apr 14 j 16:30	0° \mathcal{Q}	
	-2473 Jun 06 j 09:42	0° Υ			-2468 Jun 21 j 16:52	0° \mathbb{P}	
	-2473 Jul 24 j 03:53	0° \mathcal{B}		desc. node	-2468 Jun 23 j 10:39	1° \mathbb{P} 02'54	
asc. node	-2473 Sep 07 j 14:40	23° \mathcal{B} 35'19			-2468 Aug 06 j 07:45	0° \mathcal{L}	
	-2473 Sep 24 j 00:25	0° \mathbb{I}			-2468 Sep 16 j 04:53	0° \mathbb{M}	
retrograde	-2473 Oct 28 j 16:26	6° \mathbb{I} 33'14			-2468 Oct 25 j 06:11	0° \mathcal{A}	
	-2473 Nov 29 j 12:31	30° \mathcal{R} \mathcal{B}			-2468 Dec 03 j 00:38	0° \mathcal{Z}	
opposition	-2473 Dec 07 j 18:26	26° \mathcal{B} 45'04	3°08'15		-2467 Jan 11 j 14:24	0° \approx	
min. Earth dist.	-2473 Dec 06 j 18:34	27° \mathcal{B} 09'01	0.66892 AU		-2467 Feb 21 j 17:46	0° \mathcal{H}	
greatest brilliancy	-2473 Dec 07 j 13:14	26° \mathcal{B} 50'17	-1.3m	evening set	-2467 Feb 27 j 21:09	4° \mathcal{H} 21'49	
direct	-2472 Jan 16 j 23:52	17° \mathcal{B} 05'05			-2467 Apr 05 j 19:49	0° Υ	
	-2472 Mar 09 j 17:55	0° \mathbb{I}					
	-2472 May 07 j 21:04	0° \mathcal{S}		conjunction	-2467 Apr 23 j 21:08	12° Υ 10'37	0°-3'-17
	-2472 Jun 25 j 20:19	0° \mathcal{Q}		minimum elong	-2467 Apr 23 j 21:18	12° Υ 10'55	0°03'17
	-2472 Aug 09 j 07:12	0° \mathbb{P}		behind sun begin	-2467 Apr 22 j 23:51	11° Υ 35'03	
desc. node	-2472 Sep 18 j 12:17	29° \mathbb{P} 06'07		behind sun end	-2467 Apr 24 j 18:46	12° Υ 46'47	
	-2472 Sep 19 j 17:13	0° \mathcal{L}		asc. node	-2467 Apr 29 j 10:53	15° Υ 53'44	
evening set	-2472 Oct 21 j 00:48	23° \mathcal{L} 46'03		max. Earth dist.	-2467 May 15 j 23:52	26° Υ 49'30	2.60884 AU
	-2472 Oct 29 j 02:12	0° \mathbb{M}			-2467 May 20 j 20:11	0° \mathcal{B}	
	-2472 Dec 06 j 08:53	0° \mathcal{A}		morning rise	-2467 Jun 13 j 10:25	15° \mathcal{B} 18'01	
					-2467 Jul 06 j 10:26	0° \mathbb{I}	
conjunction	-2472 Dec 23 j 15:22	13° \mathcal{A} 37'17	0°-56'-55		-2467 Aug 23 j 06:09	0° \mathcal{S}	
minimum elong	-2472 Dec 23 j 12:31	13° \mathcal{A} 31'39	0°56'59		-2467 Oct 11 j 11:56	0° \mathcal{Q}	
	-2471 Jan 13 j 11:44	0° \mathcal{Z}			-2467 Dec 03 j 02:18	0° \mathbb{P}	
max. Earth dist.	-2471 Jan 18 j 03:06	3° \mathcal{Z} 37'35	2.37784 AU		-2466 Feb 15 j 12:39	0° \mathcal{L}	
	-2471 Feb 21 j 08:21	0° \approx		retrograde	-2466 Mar 03 j 09:48	1° \mathcal{L} 26'59	
morning rise	-2471 Mar 02 j 10:31	6° \approx 52'11			-2466 Mar 18 j 13:59	30° \mathcal{R} \mathbb{P}	
	-2471 Apr 02 j 17:52	0° \mathcal{H}		opposition	-2466 Apr 06 j 00:41	24° \mathbb{P} 55'32	2°02'47
	-2471 May 15 j 07:49	0° Υ		greatest brilliancy	-2466 Apr 07 j 01:57	24° \mathbb{P} 34'38	-2.3m
	-2471 Jun 29 j 17:05	0° \mathcal{B}		min. Earth dist.	-2466 Apr 14 j 11:19	22° \mathbb{P} 08'26	0.46542 AU
asc. node	-2471 Jul 25 j 14:16	16° \mathcal{B} 06'37		desc. node	-2466 May 11 j 09:19	16° \mathbb{P} 58'18	
	-2471 Aug 18 j 03:32	0° \mathbb{I}		direct	-2466 May 13 j 00:21	16° \mathbb{P} 57'12	
	-2471 Oct 17 j 12:57	0° \mathcal{S}			-2466 Jun 29 j 12:45	0° \mathcal{L}	
retrograde	-2471 Dec 01 j 18:48	10° \mathcal{S} 06'06			-2466 Aug 18 j 21:17	0° \mathbb{M}	
opposition	-2470 Jan 10 j 00:37	0° \mathcal{S} 52'55	4°36'20		-2466 Sep 30 j 06:29	0° \mathcal{A}	
greatest brilliancy	-2470 Jan 10 j 12:56	0° \mathcal{S} 40'46	-1.3m		-2466 Nov 10 j 01:06	0° \mathcal{Z}	
	-2470 Jan 12 j 06:15	30° \mathcal{R} \mathbb{I}			-2466 Dec 21 j 03:44	0° \approx	
min. Earth dist.	-2470 Jan 12 j 20:59	29° \mathbb{I} 45'30	0.66141 AU		-2465 Feb 01 j 13:26	0° \mathcal{H}	
direct	-2470 Feb 20 j 06:59	20° \mathbb{I} 52'09		asc. node	-2465 Mar 17 j 09:41	29° \mathcal{H} 50'39	
	-2470 Apr 03 j 18:38	0° \mathcal{S}			-2465 Mar 17 j 15:17	0° Υ	
	-2470 Jun 02 j 10:14	0° \mathcal{Q}		evening set	-2465 Apr 16 j 15:04	19° Υ 48'30	
	-2470 Jul 19 j 07:05	0° \mathbb{P}			-2465 May 02 j 06:55	0° \mathcal{B}	
desc. node	-2470 Aug 06 j 11:54	12° \mathbb{P} 39'09					
	-2470 Aug 30 j 11:06	0° \mathcal{L}		conjunction	-2465 Jun 04 j 17:54	21° \mathcal{B} 32'04	0°42'04

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 44

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

minimum elong	-2465 Jun 04 j 16:38	21°♄30'01	0°42'06	retrograde	-2460 Sep 08 j 06:08	15°♄01'00	
max. Earth dist.	-2465 Jun 10 j 02:07	24°♄57'06	2.66480 AU	min. Earth dist.	-2460 Oct 11 j 09:39	7°♄39'07	0.57493 AU
	-2465 Jun 17 j 23:50	0°♄		opposition	-2460 Oct 17 j 12:16	5°♄15'29	0°-51'-43
morning rise	-2465 Jul 20 j 21:29	20°♄57'55		greatest brilliancy	-2460 Oct 17 j 05:37	5°♄21'59	-1.7m
	-2465 Aug 04 j 01:51	0°♄			-2460 Nov 01 j 12:20	30°♄	
	-2465 Sep 20 j 00:55	0°♄		asc. node	-2460 Nov 06 j 06:40	28°♄46'53	
	-2465 Nov 05 j 19:06	0°♄		direct	-2460 Nov 23 j 01:40	26°♄54'06	
	-2465 Dec 22 j 19:57	0°♄			-2460 Dec 16 j 09:49	0°♄	
	-2464 Feb 09 j 14:30	0°♄			-2459 Feb 25 j 02:00	0°♄	
desc. node	-2464 Mar 28 j 09:38	25°♄38'40			-2459 Apr 19 j 08:45	0°♄	
	-2464 Apr 07 j 14:12	0°♄			-2459 Jun 07 j 13:31	0°♄	
retrograde	-2464 May 17 j 11:49	8°♄53'15			-2459 Jul 23 j 22:16	0°♄	
opposition	-2464 Jun 16 j 20:52	3°♄50'39	-5°-18'-8	evening set	-2459 Aug 11 j 04:06	12°♄17'35	
greatest brilliancy	-2464 Jun 16 j 19:57	3°♄51'15	-2.9m	max. Earth dist.	-2459 Aug 26 j 23:53	23°♄11'22	2.51478 AU
min. Earth dist.	-2464 Jun 16 j 23:16	3°♄49'03	0.37610 AU		-2459 Sep 05 j 17:26	0°♄	
	-2464 Jul 03 j 09:14	30°♄					
direct	-2464 Jul 17 j 00:48	28°♄48'42		conjunction	-2459 Sep 30 j 12:18	17°♄43'08	0°31'30
	-2464 Jul 30 j 11:18	0°♄		minimum elong	-2459 Sep 30 j 13:46	17°♄45'47	0°31'30
	-2464 Oct 06 j 22:38	0°♄			-2459 Oct 17 j 06:47	0°♄	
	-2464 Nov 23 j 21:02	0°♄		desc. node	-2459 Nov 18 j 07:48	24°♄03'31	
	-2463 Jan 08 j 22:51	0°♄		morning rise	-2459 Nov 24 j 06:50	28°♄36'28	
asc. node	-2463 Feb 01 j 07:47	15°♄11'05			-2459 Nov 26 j 02:29	0°♄	
	-2463 Feb 24 j 07:00	0°♄			-2458 Jan 03 j 21:02	0°♄	
	-2463 Apr 12 j 07:37	0°♄			-2458 Feb 11 j 09:33	0°♄	
evening set	-2463 May 25 j 19:33	27°♄32'39			-2458 Mar 22 j 13:32	0°♄	
	-2463 May 29 j 16:36	0°♄			-2458 May 02 j 09:41	0°♄	
max. Earth dist.	-2463 Jul 02 j 20:45	21°♄44'26	2.66640 AU		-2458 Jun 15 j 07:07	0°♄	
					-2458 Aug 04 j 14:00	0°♄	
conjunction	-2463 Jul 11 j 08:21	27°♄10'29	1°07'26	asc. node	-2458 Sep 24 j 05:49	20°♄42'06	
minimum elong	-2463 Jul 11 j 07:38	27°♄09'20	1°07'29	retrograde	-2458 Oct 15 j 05:29	23°♄21'25	
	-2463 Jul 15 j 17:55	0°♄		min. Earth dist.	-2458 Nov 21 j 21:01	14°♄25'45	0.65445 AU
morning rise	-2463 Aug 25 j 07:46	26°♄21'15		opposition	-2458 Nov 24 j 08:29	13°♄26'02	2°15'55
	-2463 Aug 30 j 20:44	0°♄		greatest brilliancy	-2458 Nov 24 j 00:36	13°♄33'57	-1.3m
	-2463 Oct 14 j 16:58	0°♄		direct	-2457 Jan 02 j 19:35	4°♄01'39	
	-2463 Nov 27 j 06:40	0°♄			-2457 Mar 24 j 19:09	0°♄	
	-2462 Jan 08 j 19:09	0°♄			-2457 May 17 j 18:27	0°♄	
desc. node	-2462 Feb 13 j 09:48	25°♄27'19			-2457 Jul 04 j 14:12	0°♄	
	-2462 Feb 19 j 18:17	0°♄			-2457 Aug 17 j 17:17	0°♄	
	-2462 Apr 03 j 06:27	0°♄		evening set	-2457 Sep 28 j 21:42	0°♄35'45	
	-2462 May 19 j 16:39	0°♄			-2457 Sep 28 j 02:31	0°♄	
retrograde	-2462 Jul 25 j 01:55	23°♄38'03		desc. node	-2457 Oct 06 j 06:27	6°♄06'42	
min. Earth dist.	-2462 Aug 21 j 21:22	18°♄23'08	0.45165 AU	max. Earth dist.	-2457 Oct 26 j 18:25	21°♄41'26	2.39223 AU
greatest brilliancy	-2462 Aug 28 j 01:46	16°♄16'28	-2.4m		-2457 Nov 06 j 13:03	0°♄	
opposition	-2462 Aug 29 j 21:57	15°♄38'25	-5°-11'-11				
direct	-2462 Oct 01 j 05:43	9°♄08'56		conjunction	-2457 Nov 27 j 05:19	16°♄06'42	0°-34'-38
	-2462 Dec 07 j 15:26	0°♄		minimum elong	-2457 Nov 27 j 02:49	16°♄01'48	0°34'39
asc. node	-2462 Dec 20 j 06:44	6°♄27'39			-2457 Dec 14 j 21:34	0°♄	
	-2461 Jan 31 j 10:53	0°♄			-2456 Jan 22 j 01:28	0°♄	
	-2461 Mar 22 j 21:34	0°♄		morning rise	-2456 Feb 02 j 15:46	9°♄02'26	
	-2461 May 10 j 20:36	0°♄			-2456 Feb 29 j 22:02	0°♄	
	-2461 Jun 27 j 11:33	0°♄			-2456 Apr 10 j 07:21	0°♄	
evening set	-2461 Jul 02 j 19:50	3°♄25'47			-2456 May 22 j 23:45	0°♄	
max. Earth dist.	-2461 Jul 27 j 15:09	19°♄33'02	2.61460 AU		-2456 Jul 07 j 21:22	0°♄	
	-2461 Aug 12 j 10:10	0°♄		asc. node	-2456 Aug 11 j 04:32	20°♄31'27	
					-2456 Aug 28 j 10:14	0°♄	
conjunction	-2461 Aug 18 j 12:40	4°♄04'57	1°06'22	retrograde	-2456 Nov 17 j 21:46	27°♄14'25	
minimum elong	-2461 Aug 18 j 13:31	4°♄06'22	1°06'24	opposition	-2456 Dec 27 j 14:45	17°♄45'00	4°10'26
	-2461 Sep 25 j 10:51	0°♄		greatest brilliancy	-2456 Dec 27 j 18:52	17°♄40'54	-1.2m
morning rise	-2461 Oct 04 j 16:43	6°♄28'02		min. Earth dist.	-2456 Dec 28 j 22:57	17°♄12'58	0.67210 AU
	-2461 Nov 06 j 15:27	0°♄		direct	-2455 Feb 06 j 15:34	7°♄49'01	
	-2461 Dec 17 j 07:38	0°♄			-2455 Apr 19 j 23:56	0°♄	
desc. node	-2460 Jan 01 j 08:25	11°♄17'59			-2455 Jun 11 j 23:13	0°♄	
	-2460 Jan 26 j 00:12	0°♄			-2455 Jul 27 j 13:06	0°♄	
	-2460 Mar 05 j 10:47	0°♄		desc. node	-2455 Aug 23 j 04:38	18°♄53'45	
	-2460 Apr 14 j 17:17	0°♄			-2455 Sep 07 j 07:41	0°♄	
	-2460 May 27 j 15:55	0°♄			-2455 Oct 16 j 18:36	0°♄	
	-2460 Jul 17 j 16:53	0°♄			-2455 Nov 24 j 01:18	0°♄	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 45

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

evening set	-2455 Dec 01 j 01:55	5°♂32'28			-2450 Aug 11 j 02:27	0°♄		
	-2454 Jan 01 j 04:23	0°♄			-2450 Sep 27 j 16:33	0°♂		
					-2450 Nov 14 j 20:58	0°♄		
conjunction	-2454 Feb 05 j 07:19	27°♄07'41	-1°-5'-20		-2449 Jan 04 j 03:13	0°♄		
minimum elong	-2454 Feb 05 j 08:31	27°♄09'59	1°05'24		-2449 Mar 04 j 21:44	0°♄		
	-2454 Feb 09 j 02:02	0°♄		desc. node	-2449 Apr 15 j 01:40	9°♄23'45		
	-2454 Mar 21 j 12:50	0°♄		retrograde	-2449 Apr 16 j 07:47	9°♄24'20		
max. Earth dist.	-2454 Mar 26 j 13:12	3°♄37'16	2.44963 AU	opposition	-2449 May 17 j 07:45	4°♄07'29	-2°-13'-3	
morning rise	-2454 Apr 10 j 08:46	14°♄11'17		greatest brilliancy	-2449 May 17 j 20:58	3°♄58'10	-2.7m	
	-2454 May 03 j 01:35	0°♄		min. Earth dist.	-2449 May 22 j 10:55	2°♄41'01	0.39531 AU	
	-2454 Jun 16 j 23:59	0°♄			-2449 Jun 02 j 06:17	30°♄♄		
asc. node	-2454 Jun 29 j 04:39	7°♄51'15		direct	-2449 Jun 18 j 17:46	28°♄11'56		
	-2454 Aug 03 j 17:00	0°♄			-2449 Jul 05 j 06:04	0°♄		
	-2454 Sep 24 j 20:57	0°♄			-2449 Sep 07 j 16:12	0°♄		
	-2454 Dec 08 j 01:31	0°♄			-2449 Oct 23 j 07:05	0°♄		
retrograde	-2454 Dec 25 j 04:00	1°♄40'38			-2449 Dec 05 j 23:00	0°♄		
	-2453 Jan 10 j 08:28	30°♄♄			-2448 Jan 19 j 00:00	0°♄		
opposition	-2453 Feb 01 j 08:56	23°♄00'18	4°52'28	asc. node	-2448 Feb 18 j 23:49	20°♄40'06		
greatest brilliancy	-2453 Feb 02 j 11:23	22°♄34'46	-1.4m		-2448 Mar 04 j 04:20	0°♄		
min. Earth dist.	-2453 Feb 06 j 13:35	21°♄00'12	0.62493 AU		-2448 Apr 19 j 12:44	0°♄		
direct	-2453 Mar 14 j 12:13	13°♄03'43		evening set	-2448 May 10 j 16:43	13°♄31'43		
	-2453 May 12 j 20:38	0°♄			-2448 Jun 05 j 13:34	0°♄		
	-2453 Jul 04 j 01:29	0°♄		max. Earth dist.	-2448 Jun 23 j 15:43	11°♄30'59	2.67239 AU	
desc. node	-2453 Jul 11 j 03:07	4°♄37'15						
	-2453 Aug 16 j 16:23	0°♄		conjunction	-2448 Jun 26 j 21:19	13°♄34'40	1°00'22	
	-2453 Sep 25 j 20:20	0°♄		minimum elong	-2448 Jun 26 j 20:13	13°♄32'55	1°00'26	
	-2453 Nov 03 j 12:16	0°♄			-2448 Jul 22 j 13:48	0°♄		
	-2453 Dec 11 j 23:28	0°♄		morning rise	-2448 Aug 10 j 22:58	12°♄28'29		
	-2452 Jan 20 j 06:15	0°♄			-2448 Sep 06 j 22:23	0°♄		
evening set	-2452 Feb 06 j 14:42	12°♄54'18			-2448 Oct 22 j 08:13	0°♄		
	-2452 Mar 01 j 02:50	0°♄			-2448 Dec 05 j 20:33	0°♄		
					-2447 Jan 18 j 18:48	0°♄		
conjunction	-2452 Apr 05 j 00:27	24°♄32'43	0°-23'-58	desc. node	-2447 Mar 02 j 02:34	28°♄47'44		
minimum elong	-2452 Apr 05 j 01:44	24°♄34'56	0°23'59		-2447 Mar 03 j 21:39	0°♄		
	-2452 Apr 12 j 23:06	0°♄			-2447 Apr 19 j 17:27	0°♄		
max. Earth dist.	-2452 May 04 j 16:54	14°♄41'42	2.57259 AU	retrograde	-2447 Jul 01 j 22:04	27°♄13'29		
asc. node	-2452 May 16 j 03:40	22°♄18'34		min. Earth dist.	-2447 Jul 28 j 11:18	22°♄40'16	0.40663 AU	
	-2452 May 27 j 20:15	0°♄		greatest brilliancy	-2447 Aug 02 j 10:39	21°♄10'03	-2.6m	
morning rise	-2452 May 28 j 10:34	0°♄23'25		opposition	-2447 Aug 04 j 06:28	20°♄36'34	-6°-30'-53	
	-2452 Jul 13 j 12:57	0°♄		direct	-2447 Sep 03 j 21:36	15°♄01'45		
	-2452 Aug 30 j 23:07	0°♄			-2447 Oct 27 j 23:47	0°♄		
	-2452 Oct 21 j 00:36	0°♄			-2447 Dec 22 j 10:47	0°♄		
retrograde	-2451 Feb 08 j 10:36	12°♄10'47		asc. node	-2446 Jan 05 j 22:31	8°♄36'05		
opposition	-2451 Mar 15 j 18:33	4°♄53'12	3°35'17		-2446 Feb 10 j 04:20	0°♄		
greatest brilliancy	-2451 Mar 17 j 08:19	4°♄19'44	-2.0m		-2446 Mar 30 j 20:19	0°♄		
min. Earth dist.	-2451 Mar 24 j 02:00	1°♄57'08	0.51763 AU	evening set	-2446 May 18 j 00:39	0°♄		
	-2451 Mar 30 j 00:58	30°♄♄			-2446 Jun 18 j 00:32	19°♄33'38		
direct	-2451 Apr 23 j 17:13	25°♄58'03		max. Earth dist.	-2446 Jul 04 j 08:42	0°♄		
	-2451 May 19 j 03:08	0°♄			-2446 Jul 17 j 16:00	8°♄34'45	2.64129 AU	
desc. node	-2451 May 28 j 02:32	3°♄01'49		conjunction	-2446 Aug 03 j 07:14	19°♄25'18	1°10'21	
	-2451 Jul 18 j 10:59	0°♄		minimum elong	-2446 Aug 03 j 07:27	19°♄25'38	1°10'24	
	-2451 Aug 31 j 06:04	0°♄			-2446 Aug 19 j 07:53	0°♄		
	-2451 Oct 10 j 14:58	0°♄		morning rise	-2446 Sep 18 j 02:45	20°♄02'46		
	-2451 Nov 19 j 06:35	0°♄			-2446 Oct 02 j 14:49	0°♄		
	-2451 Dec 29 j 13:38	0°♄			-2446 Nov 14 j 05:57	0°♄		
	-2450 Feb 09 j 07:55	0°♄			-2446 Dec 25 j 11:29	0°♄		
	-2450 Mar 24 j 22:04	0°♄		desc. node	-2445 Jan 18 j 02:49	17°♄32'26		
evening set	-2450 Mar 30 j 07:32	3°♄37'40			-2445 Feb 03 j 18:47	0°♄		
asc. node	-2450 Apr 03 j 01:16	6°♄07'53			-2445 Mar 15 j 22:11	0°♄		
	-2450 May 09 j 05:57	0°♄			-2445 Apr 26 j 05:38	0°♄		
					-2445 Jun 10 j 19:34	0°♄		
conjunction	-2450 May 20 j 06:16	7°♄09'04	0°26'26	retrograde	-2445 Aug 23 j 22:30	27°♄27'54		
minimum elong	-2450 May 20 j 05:16	7°♄07'26	0°26'28	min. Earth dist.	-2445 Sep 24 j 00:02	20°♄52'55	0.52958 AU	
max. Earth dist.	-2450 May 31 j 17:24	14°♄33'01	2.64937 AU	greatest brilliancy	-2445 Sep 30 j 09:54	18°♄26'53	-1.9m	
	-2450 Jun 24 j 20:08	0°♄		opposition	-2445 Oct 01 j 07:17	18°♄06'33	-2°-26'-51	
morning rise	-2450 Jul 06 j 16:54	7°♄33'26		direct	-2445 Nov 05 j 08:06	10°♄21'59		

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 46

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

asc. node	-2445 Nov 23 j 21:12	12° ♄ 24'32			-2440 Dec 01 j 14:39	0° ♄	
	-2444 Jan 10 j 19:31	0° ♄					
	-2444 Mar 07 j 08:41	0° ♄		conjunction	-2439 Jan 08 j 14:01	29° ♄ 54'05	-1°-4'-11
	-2444 Apr 27 j 08:38	0° ♄		minimum elong	-2439 Jan 08 j 12:21	29° ♄ 50'49	1°04'15
	-2444 Jun 14 j 18:47	0° ♄			-2439 Jan 08 j 17:03	0° ♄	
evening set	-2444 Jul 25 j 21:38	26° ♄ 39'47			-2439 Feb 16 j 13:10	0° ♄	
	-2444 Jul 30 j 22:05	0° ♄		max. Earth dist.	-2439 Feb 23 j 14:16	5° ♄ 20'07	2.39846 AU
max. Earth dist.	-2444 Aug 13 j 13:21	9° ♄ 09'58	2.55906 AU	morning rise	-2439 Mar 17 j 10:30	21° ♄ 36'46	
					-2439 Mar 28 j 21:57	0° ♄	
conjunction	-2444 Sep 12 j 06:22	29° ♄ 38'36	0°49'29		-2439 May 10 j 10:07	0° ♄	
minimum elong	-2444 Sep 12 j 07:56	29° ♄ 41'21	0°49'30		-2439 Jun 24 j 13:10	0° ♄	
	-2444 Sep 12 j 18:34	0° ♄		asc. node	-2439 Jul 15 j 19:52	13° ♄ 27'39	
	-2444 Oct 24 j 13:01	0° ♄			-2439 Aug 12 j 03:19	0° ♄	
morning rise	-2444 Nov 02 j 04:11	6° ♄ 22'01			-2439 Oct 07 j 01:04	0° ♄	
	-2444 Dec 03 j 15:39	0° ♄		retrograde	-2439 Dec 10 j 01:10	18° ♄ 06'24	
desc. node	-2444 Dec 05 j 01:00	1° ♄ 03'26		opposition	-2438 Jan 17 j 23:34	9° ♄ 03'56	4°46'02
	-2443 Jan 11 j 17:14	0° ♄		greatest brilliancy	-2438 Jan 18 j 16:55	8° ♄ 46'57	-1.3m
	-2443 Feb 19 j 12:13	0° ♄		min. Earth dist.	-2438 Jan 21 j 16:21	7° ♄ 37'02	0.65107 AU
	-2443 Mar 30 j 22:42	0° ♄			-2438 Feb 16 j 03:35	30° ♄	
	-2443 May 11 j 05:23	0° ♄		direct	-2438 Feb 28 j 06:55	29° ♄ 02'56	
	-2443 Jun 25 j 08:15	0° ♄			-2438 Mar 12 j 21:25	0° ♄	
	-2443 Aug 20 j 22:21	0° ♄			-2438 May 26 j 10:10	0° ♄	
retrograde	-2443 Oct 01 j 10:46	9° ♄ 30'05			-2438 Jul 13 j 15:23	0° ♄	
asc. node	-2443 Oct 10 j 21:02	8° ♄ 53'16		desc. node	-2438 Jul 27 j 20:09	9° ♄ 41'33	
min. Earth dist.	-2443 Nov 06 j 11:07	1° ♄ 07'20	0.63010 AU		-2438 Aug 25 j 06:06	0° ♄	
	-2443 Nov 09 j 06:27	30° ♄			-2438 Oct 04 j 00:46	0° ♄	
opposition	-2443 Nov 10 j 09:58	29° ♄ 32'27	1°12'48		-2438 Nov 11 j 11:21	0° ♄	
greatest brilliancy	-2443 Nov 10 j 03:16	29° ♄ 39'09	-1.5m		-2438 Dec 19 j 17:52	0° ♄	
direct	-2443 Dec 18 j 21:38	20° ♄ 28'17		evening set	-2437 Jan 12 j 17:43	18° ♄ 32'17	
	-2442 Jan 31 j 22:57	0° ♄			-2437 Jan 27 j 19:34	0° ♄	
	-2442 Apr 04 j 12:34	0° ♄			-2437 Mar 09 j 10:40	0° ♄	
	-2442 May 25 j 22:12	0° ♄					
	-2442 Jul 12 j 00:21	0° ♄		conjunction	-2437 Mar 15 j 22:28	4° ♄ 39'48	0°-44'-2
	-2442 Aug 24 j 22:54	0° ♄		minimum elong	-2437 Mar 16 j 00:45	4° ♄ 43'54	0°44'02
evening set	-2442 Sep 08 j 11:04	10° ♄ 19'23			-2437 Apr 21 j 02:23	0° ♄	
max. Earth dist.	-2442 Sep 24 j 16:19	22° ♄ 06'18	2.43821 AU	max. Earth dist.	-2437 Apr 22 j 19:01	1° ♄ 09'38	2.52884 AU
	-2442 Oct 05 j 08:55	0° ♄		morning rise	-2437 May 12 j 00:44	14° ♄ 11'29	
desc. node	-2442 Oct 22 j 23:02	13° ♄ 11'59		asc. node	-2437 Jun 02 j 19:08	28° ♄ 37'01	
					-2437 Jun 04 j 21:51	0° ♄	
conjunction	-2442 Nov 02 j 13:44	21° ♄ 16'30	0°-7'-19		-2437 Jul 21 j 20:06	0° ♄	
minimum elong	-2442 Nov 02 j 13:13	21° ♄ 15'32	0°07'21		-2437 Sep 09 j 04:30	0° ♄	
behind sun begin	-2442 Nov 01 j 14:43	20° ♄ 32'33			-2437 Nov 02 j 10:04	0° ♄	
behind sun end	-2442 Nov 03 j 11:43	21° ♄ 58'32		retrograde	-2436 Jan 20 j 18:12	25° ♄ 23'14	
	-2442 Nov 13 j 22:18	0° ♄		opposition	-2436 Feb 26 j 10:25	17° ♄ 27'59	4°26'08
	-2442 Dec 22 j 09:55	0° ♄		greatest brilliancy	-2436 Feb 27 j 23:57	16° ♄ 53'12	-1.7m
morning rise	-2441 Jan 04 j 08:19	10° ♄ 09'12		min. Earth dist.	-2436 Mar 04 j 18:33	14° ♄ 45'20	0.56554 AU
	-2441 Jan 29 j 16:19	0° ♄		direct	-2436 Apr 06 j 14:53	7° ♄ 57'31	
	-2441 Mar 09 j 14:33	0° ♄			-2436 Jun 12 j 20:05	0° ♄	
	-2441 Apr 19 j 01:46	0° ♄		desc. node	-2436 Jun 13 j 18:39	0° ♄ 30'59	
	-2441 Jun 01 j 00:16	0° ♄			-2436 Jul 30 j 18:56	0° ♄	
	-2441 Jul 17 j 19:50	0° ♄			-2436 Sep 10 j 09:33	0° ♄	
asc. node	-2441 Aug 28 j 21:06	23° ♄ 26'43			-2436 Oct 19 j 19:18	0° ♄	
	-2441 Sep 11 j 16:22	0° ♄			-2436 Nov 27 j 19:36	0° ♄	
retrograde	-2441 Nov 05 j 09:27	14° ♄ 25'28			-2435 Jan 06 j 14:08	0° ♄	
opposition	-2441 Dec 15 j 09:21	4° ♄ 43'12	3°34'05		-2435 Feb 16 j 21:25	0° ♄	
greatest brilliancy	-2441 Dec 15 j 06:52	4° ♄ 45'42	-1.2m	evening set	-2435 Mar 11 j 11:10	15° ♄ 50'25	
min. Earth dist.	-2441 Dec 15 j 05:27	4° ♄ 47'06	0.67275 AU		-2435 Apr 01 j 02:37	0° ♄	
	-2441 Dec 27 j 18:35	30° ♄		asc. node	-2435 Apr 19 j 17:35	12° ♄ 32'03	
direct	-2440 Jan 24 j 23:10	24° ♄ 56'24					
	-2440 Feb 24 j 22:02	0° ♄		conjunction	-2435 May 03 j 19:54	21° ♄ 53'12	0°08'12
	-2440 May 01 j 11:06	0° ♄		minimum elong	-2435 May 03 j 19:32	21° ♄ 52'35	0°08'14
	-2440 Jun 20 j 13:23	0° ♄		behind sun begin	-2435 May 03 j 01:11	21° ♄ 22'20	
	-2440 Aug 04 j 09:11	0° ♄		behind sun end	-2435 May 04 j 13:53	22° ♄ 22'50	
desc. node	-2440 Sep 08 j 21:53	25° ♄ 32'06			-2435 May 16 j 04:28	0° ♄	
	-2440 Sep 14 j 22:29	0° ♄		max. Earth dist.	-2435 May 22 j 00:16	3° ♄ 47'57	2.62557 AU
	-2440 Oct 24 j 08:15	0° ♄		morning rise	-2435 Jun 22 j 02:19	23° ♄ 50'56	
evening set	-2440 Nov 04 j 05:10	8° ♄ 27'59			-2435 Jul 01 j 17:38	0° ♄	

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 47

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2435 Aug 18 j 07:11	0°☿		asc. node	-2430 Dec 10 j 13:19	7°♄02'09	
	-2435 Oct 05 j 19:25	0°♌			-2429 Jan 24 j 09:36	0°♊	
	-2435 Nov 25 j 07:19	0°♍			-2429 Mar 17 j 08:52	0°♈	
	-2434 Jan 22 j 03:30	0°♊			-2429 May 05 j 22:25	0°♊	
retrograde	-2434 Mar 18 j 00:04	14°♊12'29			-2429 Jun 22 j 19:44	0°☿	
opposition	-2434 Apr 19 j 15:10	8°♊08'46	0°45'50	evening set	-2429 Jul 11 j 10:50	11°☿59'23	
greatest brilliancy	-2434 Apr 20 j 00:59	8°♊01'02	-2.5m	max. Earth dist.	-2429 Aug 02 j 20:45	26°☿41'32	2.59691 AU
min. Earth dist.	-2434 Apr 27 j 11:59	5°♊40'31	0.43728 AU		-2429 Aug 07 j 20:10	0°♌	
desc. node	-2434 May 01 j 19:18	4°♊24'51					
direct	-2434 May 25 j 03:22	0°♊51'08		conjunction	-2429 Aug 27 j 13:44	13°♌17'15	1°01'45
	-2434 Aug 09 j 04:41	0°♍		minimum elong	-2429 Aug 27 j 14:55	13°♌19'16	1°01'47
	-2434 Sep 22 j 23:01	0°♍			-2429 Sep 20 j 19:45	0°♍	
	-2434 Nov 03 j 18:21	0°♎		morning rise	-2429 Oct 14 j 19:10	16°♍56'58	
	-2434 Dec 15 j 12:15	0°♏			-2429 Nov 01 j 20:49	0°♊	
	-2433 Jan 27 j 08:20	0°♋			-2429 Dec 12 j 08:00	0°♍	
asc. node	-2433 Mar 07 j 14:37	26°♋35'17		desc. node	-2429 Dec 22 j 17:55	7°♍52'04	
	-2433 Mar 12 j 17:41	0°♊			-2428 Jan 20 j 18:27	0°♍	
evening set	-2433 Apr 26 j 00:42	28°♊59'40			-2428 Feb 28 j 22:13	0°♎	
	-2433 Apr 27 j 14:02	0°♈			-2428 Apr 08 j 19:09	0°♏	
					-2428 May 20 j 21:20	0°♋	
conjunction	-2433 Jun 13 j 07:37	29°♈57'39	0°49'46		-2428 Jul 07 j 14:25	0°♊	
minimum elong	-2433 Jun 13 j 06:20	29°♈55'35	0°49'48	retrograde	-2428 Sep 16 j 23:48	24°♊36'11	
	-2433 Jun 13 j 09:06	0°♊		min. Earth dist.	-2428 Oct 21 j 05:12	16°♊50'58	0.59696 AU
max. Earth dist.	-2433 Jun 15 j 10:48	1°♊19'15	2.66993 AU	opposition	-2428 Oct 26 j 13:57	14°♊43'33	0°-2'-23
morning rise	-2433 Jul 28 j 22:34	29°♊03'28		greatest brilliancy	-2427 Aug 10 j 11:17	14°♌59'47	-4.7m
	-2433 Jul 30 j 09:58	0°☿		asc. node	-2428 Oct 27 j 12:35	14°♊21'12	
	-2433 Sep 15 j 02:57	0°♌		direct	-2428 Dec 02 j 21:31	6°♊04'59	
	-2433 Oct 31 j 07:44	0°♍			-2427 Feb 17 j 06:47	0°♈	
	-2433 Dec 16 j 05:55	0°♊			-2427 Apr 13 j 17:46	0°♊	
	-2432 Jan 31 j 15:13	0°♍			-2427 Jun 02 j 14:39	0°☿	
desc. node	-2432 Mar 18 j 19:24	28°♍48'36			-2427 Jul 19 j 05:18	0°♌	
	-2432 Mar 20 j 21:37	0°♍		evening set	-2427 Aug 21 j 00:29	22°♌15'50	
retrograde	-2432 Jun 03 j 21:42	26°♍51'23			-2427 Sep 01 j 02:09	0°♍	
min. Earth dist.	-2432 Jul 02 j 00:50	22°♍17'47	0.37895 AU	max. Earth dist.	-2427 Sep 05 j 00:38	2°♍46'44	2.48832 AU
opposition	-2432 Jul 04 j 23:37	21°♍29'42	-6°-22'-38				
greatest brilliancy	-2432 Jul 04 j 03:59	21°♍43'03	-2.8m	conjunction	-2427 Oct 11 j 18:56	29°♍23'22	0°18'38
direct	-2432 Aug 03 j 15:58	16°♍30'40		minimum elong	-2427 Oct 11 j 19:58	29°♍25'16	0°18'38
	-2432 Sep 22 j 14:30	0°♎			-2427 Oct 12 j 14:45	0°♊	
	-2432 Nov 15 j 17:22	0°♏		desc. node	-2427 Nov 08 j 16:14	20°♊18'44	
	-2431 Jan 02 j 16:14	0°♋			-2427 Nov 21 j 08:35	0°♍	
asc. node	-2431 Jan 22 j 13:17	12°♋37'48		morning rise	-2427 Dec 08 j 04:06	12°♍58'42	
	-2431 Feb 18 j 21:42	0°♊			-2427 Dec 30 j 00:37	0°♍	
	-2431 Apr 07 j 09:33	0°♈			-2426 Feb 06 j 10:31	0°♎	
	-2431 May 25 j 00:25	0°♊			-2426 Mar 17 j 11:31	0°♏	
evening set	-2431 Jun 03 j 08:09	5°♊53'37			-2426 Apr 27 j 02:34	0°♋	
max. Earth dist.	-2431 Jul 08 j 06:32	28°♊08'33	2.65975 AU		-2426 Jun 09 j 12:02	0°♊	
	-2431 Jul 11 j 03:57	0°☿			-2426 Jul 27 j 23:26	0°♈	
				asc. node	-2426 Sep 14 j 11:45	23°♈26'42	
conjunction	-2431 Jul 19 j 15:43	5°☿28'08	1°09'44		-2426 Oct 07 j 17:09	0°♊	
minimum elong	-2431 Jul 19 j 15:19	5°☿27'30	1°09'47	retrograde	-2426 Oct 22 j 23:48	1°♊25'56	
	-2431 Aug 26 j 05:20	0°♌			-2426 Nov 06 j 14:08	30°♈	
morning rise	-2431 Sep 02 j 18:30	5°♌00'12		min. Earth dist.	-2426 Nov 30 j 11:19	22°♈13'51	0.66366 AU
	-2431 Oct 09 j 20:35	0°♍		opposition	-2426 Dec 02 j 02:55	21°♈34'07	2°47'44
	-2431 Nov 22 j 01:18	0°♊		greatest brilliancy	-2426 Dec 01 j 20:06	21°♈40'58	-1.3m
	-2430 Jan 03 j 01:04	0°♍		direct	-2425 Jan 11 j 00:50	12°♈00'26	
desc. node	-2430 Feb 03 j 18:42	23°♍04'02			-2425 Mar 16 j 10:14	0°♊	
	-2430 Feb 13 j 06:35	0°♍			-2425 May 12 j 01:07	0°☿	
	-2430 Mar 26 j 15:22	0°♎			-2425 Jun 29 j 13:14	0°♌	
	-2430 May 09 j 05:04	0°♏			-2425 Aug 12 j 22:00	0°♍	
	-2430 Jul 03 j 06:05	0°♋			-2425 Sep 23 j 08:46	0°♊	
retrograde	-2430 Aug 05 j 14:30	7°♋06'46		desc. node	-2425 Sep 26 j 14:17	2°♊24'32	
min. Earth dist.	-2430 Sep 03 j 12:50	1°♋23'20	0.47952 AU	evening set	-2425 Oct 11 j 16:00	13°♊46'27	
	-2430 Sep 07 j 10:22	30°♋			-2425 Nov 01 j 19:12	0°♍	
greatest brilliancy	-2430 Sep 09 j 23:42	29°♋04'33	-2.2m	max. Earth dist.	-2425 Dec 01 j 19:53	23°♍28'11	2.37588 AU
opposition	-2430 Sep 11 j 13:12	28°♋30'48	-4°-12'-4		-2425 Dec 10 j 02:54	0°♍	
direct	-2430 Oct 14 j 20:06	21°♋32'19					
	-2430 Nov 23 j 15:14	0°♋		conjunction	-2425 Dec 12 j 10:43	1°♍49'59	0°-48'-28

Planetary Phenomena of Mars from -2900 through -2400 (UT), Astrodienst AG 7-Dez-2017 14:40, page 48

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

minimum elong	-2425 Dec 12 j 07:39	1° 𐌶 43'56	0°48'30		-2420 Oct 14 j 15:32	0° Ω	
	-2424 Jan 17 j 06:01	0° 𐌹			-2420 Dec 08 j 09:41	0° 𐌹	
morning rise	-2424 Feb 19 j 03:39	25° 𐌹 28'48		retrograde	-2419 Feb 20 j 23:57	23° 𐌹 11'14	
	-2424 Feb 25 j 01:56	0° \approx		opposition	-2419 Mar 27 j 09:35	16° 𐌹 18'14	2°48'08
	-2424 Apr 05 j 10:04	0° 𐌶		greatest brilliancy	-2419 Mar 28 j 18:13	15° 𐌹 50'16	-2.1m
	-2424 May 17 j 23:24	0° 𐌶		min. Earth dist.	-2419 Apr 04 j 21:46	13° 𐌹 23'51	0.48894 AU
	-2424 Jul 02 j 11:13	0° 𐌹		direct	-2419 May 04 j 08:43	7° 𐌹 51'25	
asc. node	-2424 Aug 01 j 11:46	18° 𐌹 26'56		desc. node	-2419 May 18 j 11:16	9° 𐌹 11'24	
	-2424 Aug 21 j 12:47	0° 𐌹			-2419 Jul 08 j 12:49	0° 𐌹	
	-2424 Oct 26 j 05:46	0° 𐌹			-2419 Aug 24 j 01:58	0° 𐌹	
retrograde	-2424 Nov 25 j 19:06	5° 𐌹 02'19			-2419 Oct 04 j 10:06	0° 𐌹	
	-2424 Dec 23 j 20:38	30° 𐌹			-2419 Nov 13 j 14:34	0° 𐌹	
opposition	-2423 Jan 04 j 06:50	25° 𐌹 41'30	4°26'39		-2419 Dec 24 j 06:48	0° \approx	
greatest brilliancy	-2423 Jan 04 j 15:23	25° 𐌹 33'03	-1.3m		-2418 Feb 04 j 07:48	0° 𐌶	
min. Earth dist.	-2423 Jan 06 j 11:19	24° 𐌹 49'34	0.66748 AU		-2418 Mar 20 j 02:58	0° 𐌶	
direct	-2423 Feb 14 j 11:49	15° 𐌹 42'13		asc. node	-2418 Mar 24 j 07:18	2° 𐌶 48'07	
	-2423 Apr 10 j 17:36	0° 𐌹		evening set	-2418 Apr 09 j 08:42	13° 𐌶 28'46	
	-2423 Jun 05 j 23:20	0° Ω			-2418 May 04 j 13:52	0° 𐌹	
	-2423 Jul 22 j 07:25	0° 𐌹					
desc. node	-2423 Aug 13 j 13:53	15° 𐌹 36'31		conjunction	-2418 May 29 j 05:31	15° 𐌹 55'44	0°35'51
	-2423 Sep 02 j 08:14	0° 𐌹		minimum elong	-2418 May 29 j 04:18	15° 𐌹 53'48	0°35'53
	-2423 Oct 11 j 21:34	0° 𐌹		max. Earth dist.	-2418 Jun 06 j 06:56	21° 𐌹 06'02	2.65891 AU
	-2423 Nov 19 j 05:04	0° 𐌹			-2418 Jun 20 j 04:54	0° 𐌹	
greatest brilliancy	-2423 Nov 30 j 01:26	8° 𐌹 33'07	1.2m	morning rise	-2418 Jul 14 j 21:28	15° 𐌹 43'41	
evening set	-2423 Dec 16 j 17:51	21° 𐌹 41'01			-2418 Aug 06 j 08:24	0° 𐌹	
	-2423 Dec 27 j 08:38	0° 𐌹			-2418 Sep 22 j 13:34	0° Ω	
	-2422 Feb 04 j 06:54	0° \approx			-2418 Nov 08 j 21:20	0° 𐌹	
					-2418 Dec 27 j 01:51	0° 𐌹	
conjunction	-2422 Feb 20 j 03:00	11° \approx 54'14	0°-59'-59		-2417 Feb 16 j 18:39	0° 𐌹	
minimum elong	-2422 Feb 20 j 05:13	11° \approx 58'21	1°00'02	desc. node	-2417 Apr 05 j 11:34	21° 𐌹 10'54	
	-2422 Mar 16 j 18:11	0° 𐌶		retrograde	-2417 May 04 j 09:41	25° 𐌹 58'14	
max. Earth dist.	-2422 Apr 06 j 22:56	15° 𐌶 08'53	2.47916 AU	opposition	-2417 Jun 03 j 17:41	20° 𐌹 56'19	-4°-3'-41
morning rise	-2422 Apr 22 j 14:45	26° 𐌶 05'19		greatest brilliancy	-2417 Jun 04 j 03:52	20° 𐌹 49'29	-2.8m
	-2422 Apr 28 j 06:55	0° 𐌶		min. Earth dist.	-2417 Jun 06 j 07:26	20° 𐌹 14'50	0.38095 AU
	-2422 Jun 12 j 02:47	0° 𐌹		direct	-2417 Jul 04 j 17:16	15° 𐌹 37'19	
asc. node	-2422 Jun 19 j 10:25	4° 𐌹 44'58			-2417 Aug 24 j 06:54	0° 𐌹	
	-2422 Jul 29 j 10:34	0° 𐌹			-2417 Oct 14 j 17:30	0° 𐌹	
	-2422 Sep 18 j 06:01	0° 𐌹			-2417 Nov 29 j 06:57	0° \approx	
	-2422 Nov 18 j 09:47	0° Ω			-2416 Jan 13 j 07:10	0° 𐌶	
retrograde	-2421 Jan 03 j 08:04	10° Ω 14'46		asc. node	-2416 Feb 09 j 05:43	17° 𐌶 44'43	
opposition	-2421 Feb 10 j 01:50	1° Ω 48'47	4°48'29		-2416 Feb 28 j 01:02	0° 𐌶	
greatest brilliancy	-2421 Feb 11 j 08:57	1° Ω 19'07	-1.5m		-2416 Apr 14 j 17:14	0° 𐌹	
	-2421 Feb 14 j 19:57	30° 𐌹		evening set	-2416 May 19 j 10:12	22° 𐌹 03'56	
min. Earth dist.	-2421 Feb 16 j 02:01	29° 𐌹 31'37	0.60646 AU		-2416 May 31 j 22:11	0° 𐌹	
direct	-2421 Mar 23 j 00:07	21° 𐌹 58'17		max. Earth dist.	-2416 Jun 29 j 00:38	17° 𐌹 52'54	2.67011 AU
	-2421 Apr 30 j 08:28	0° Ω					
	-2421 Jun 27 j 06:05	0° 𐌹		conjunction	-2416 Jul 05 j 04:40	21° 𐌹 49'20	1°04'55
desc. node	-2421 Jul 01 j 12:43	2° 𐌹 40'57		minimum elong	-2416 Jul 05 j 03:46	21° 𐌹 47'53	1°04'59
	-2421 Aug 10 j 22:25	0° 𐌹			-2416 Jul 17 j 23:04	0° 𐌹	
	-2421 Sep 20 j 12:09	0° 𐌹		morning rise	-2416 Aug 19 j 03:40	20° 𐌹 48'49	
	-2421 Oct 29 j 08:57	0° 𐌹			-2416 Sep 02 j 04:45	0° Ω	
	-2421 Dec 06 j 23:26	0° 𐌹			-2416 Oct 17 j 07:25	0° 𐌹	
	-2420 Jan 15 j 09:00	0° \approx			-2416 Nov 30 j 06:54	0° 𐌹	
evening set	-2420 Feb 19 j 13:28	25° \approx 51'29			-2415 Jan 12 j 09:15	0° 𐌹	
	-2420 Feb 25 j 07:50	0° 𐌶		desc. node	-2415 Feb 20 j 12:01	27° 𐌹 27'29	
	-2420 Apr 08 j 05:57	0° 𐌶			-2415 Feb 24 j 03:13	0° 𐌹	
					-2415 Apr 08 j 23:21	0° 𐌹	
conjunction	-2420 Apr 16 j 00:35	5° 𐌶 17'20	0°-11'-56		-2415 May 29 j 16:19	0° \approx	
minimum elong	-2420 Apr 16 j 01:12	5° 𐌶 18'22	0°11'57	retrograde	-2415 Jul 15 j 11:51	13° \approx 04'48	
behind sun begin	-2420 Apr 15 j 10:20	4° 𐌶 53'12		min. Earth dist.	-2415 Aug 11 j 14:07	8° \approx 11'07	0.43006 AU
behind sun end	-2420 Apr 16 j 16:04	5° 𐌶 43'31		greatest brilliancy	-2415 Aug 17 j 08:45	6° \approx 18'25	-2.5m
asc. node	-2420 May 06 j 08:30	18° 𐌶 55'26		opposition	-2415 Aug 19 j 07:10	5° \approx 40'16	-5°-51'-57
max. Earth dist.	-2420 May 11 j 10:37	22° 𐌶 17'48	2.59364 AU		-2415 Sep 12 j 02:22	30° 𐌹	
	-2420 May 23 j 03:29	0° 𐌹		direct	-2415 Sep 19 j 19:48	29° 𐌹 35'39	
morning rise	-2420 Jun 06 j 18:14	9° 𐌹 30'56			-2415 Sep 27 j 16:37	0° \approx	
	-2420 Jul 08 j 17:45	0° 𐌹			-2415 Dec 13 j 22:24	0° 𐌶	
	-2420 Aug 25 j 18:20	0° 𐌹		asc. node	-2415 Dec 27 j 04:27	7° 𐌶 20'59	

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

	-2414 Feb 04 j 01:06	0°Υ		minimum elong	-2410 Nov 16 j 00:32	5°♄15'16	0°23'00
	-2414 Mar 25 j 14:54	0°Ϡ			-2410 Dec 17 j 15:45	0°♁	
	-2414 May 13 j 05:25	0°Π		morning rise	-2409 Jan 20 j 17:22	26°♁46'27	
evening set	-2414 Jun 26 j 11:44	27°♄55'11			-2409 Jan 24 j 20:19	0°♄	
	-2414 Jun 29 j 17:44	0°♄			-2409 Mar 04 j 16:45	0°≈	
max. Earth dist.	-2414 Jul 23 j 10:23	15°♄19'06	2.62746 AU		-2409 Apr 14 j 01:26	0°♁	
					-2409 May 26 j 18:21	0°Υ	
conjunction	-2414 Aug 11 j 22:35	28°♄09'12	1°08'37		-2409 Jul 11 j 21:43	0°Ϡ	
minimum elong	-2414 Aug 11 j 23:10	28°♄10'11	1°08'40	asc. node	-2409 Aug 19 j 02:04	22°♁19'45	
	-2414 Aug 14 j 17:17	0°♄			-2409 Sep 02 j 16:19	0°Π	
morning rise	-2414 Sep 27 j 10:04	29°♄39'56		retrograde	-2409 Nov 13 j 03:13	22°♄14'18	
	-2414 Sep 27 j 21:39	0°♄		opposition	-2409 Dec 23 j 00:05	12°♄38'48	3°56'25
	-2414 Nov 09 j 07:29	0°♄		greatest brilliancy	-2409 Dec 23 j 01:05	12°♄37'49	-1.2m
	-2414 Dec 20 j 06:01	0°♄		min. Earth dist.	-2409 Dec 23 j 16:34	12°♄22'22	0.67373 AU
desc. node	-2413 Jan 08 j 10:24	14°♄20'28		direct	-2408 Feb 01 j 20:48	2°♄46'17	
	-2413 Jan 29 j 04:55	0°♁			-2408 Apr 24 j 09:30	0°♄	
	-2413 Mar 09 j 21:58	0°♄			-2408 Jun 15 j 01:35	0°♄	
	-2413 Apr 19 j 12:53	0°≈			-2408 Jul 30 j 08:56	0°♄	
	-2413 Jun 02 j 05:55	0°♁		desc. node	-2408 Aug 30 j 06:53	22°♄02'09	
	-2413 Jul 27 j 15:17	0°Υ			-2408 Sep 10 j 02:17	0°♄	
retrograde	-2413 Sep 02 j 10:59	8°Υ09'15			-2408 Oct 19 j 13:33	0°♄	
min. Earth dist.	-2413 Oct 04 j 16:19	1°Υ07'48	0.55541 AU	evening set	-2408 Nov 19 j 03:06	23°♄54'54	
	-2413 Oct 07 j 14:44	30°♁			-2408 Nov 26 j 20:21	0°♁	
opposition	-2413 Oct 11 j 08:38	28°♁32'42	-1°-30'-36		-2407 Jan 03 j 22:46	0°♄	
greatest brilliancy	-2413 Oct 10 j 20:12	28°♁44'44	-1.8m				
asc. node	-2413 Nov 14 j 04:03	20°♁28'24		conjunction	-2407 Jan 24 j 09:33	15°♄54'23	-1°-6'-37
direct	-2413 Nov 16 j 06:48	20°♁26'40		minimum elong	-2407 Jan 24 j 09:35	15°♄54'27	1°06'40
	-2413 Dec 29 j 17:18	0°Υ			-2407 Feb 11 j 18:57	0°≈	
	-2412 Feb 29 j 21:12	0°Ϡ		max. Earth dist.	-2407 Mar 15 j 15:12	23°≈47'13	2.42585 AU
	-2412 Apr 22 j 02:35	0°Π			-2407 Mar 24 j 03:31	0°♁	
	-2412 Jun 09 j 23:45	0°♄		morning rise	-2407 Mar 31 j 09:20	5°♁14'05	
	-2412 Jul 26 j 07:03	0°♄			-2407 May 05 j 14:19	0°Υ	
evening set	-2412 Aug 04 j 01:19	5°♄51'45			-2407 Jun 19 j 12:42	0°Ϡ	
max. Earth dist.	-2412 Aug 20 j 21:47	17°♄19'10	2.53525 AU	asc. node	-2407 Jul 06 j 01:55	10°♁36'00	
	-2412 Sep 08 j 04:00	0°♄			-2407 Aug 06 j 11:46	0°Π	
					-2407 Sep 28 j 19:08	0°♄	
conjunction	-2412 Sep 22 j 09:54	10°♄05'31	0°39'52	retrograde	-2407 Dec 18 j 13:25	26°♄14'38	
minimum elong	-2412 Sep 22 j 11:29	10°♄08'21	0°39'52	opposition	-2406 Jan 26 j 03:10	17°♄23'51	4°51'12
	-2412 Oct 19 j 20:25	0°♄		greatest brilliancy	-2406 Jan 27 j 01:37	17°♄02'02	-1.4m
morning rise	-2412 Nov 14 j 07:30	18°♄59'18		min. Earth dist.	-2406 Jan 30 j 16:25	15°♄37'51	0.63790 AU
desc. node	-2412 Nov 25 j 09:44	27°♄23'42		direct	-2406 Mar 08 j 09:37	7°♄24'15	
	-2412 Nov 28 j 19:48	0°♄			-2406 May 18 j 11:01	0°♄	
	-2411 Jan 06 j 17:33	0°♁			-2406 Jul 07 j 17:15	0°♄	
	-2411 Feb 14 j 08:29	0°♄		desc. node	-2406 Jul 18 j 05:02	6°♄59'58	
	-2411 Mar 25 j 14:25	0°≈			-2406 Aug 19 j 21:49	0°♄	
	-2411 May 05 j 13:07	0°♁			-2406 Sep 28 j 22:11	0°♄	
	-2411 Jun 18 j 18:51	0°Υ			-2406 Nov 06 j 11:44	0°♁	
	-2411 Aug 09 j 17:27	0°Ϡ			-2406 Dec 14 j 20:15	0°♄	
asc. node	-2411 Oct 01 j 03:24	17°♁32'08			-2405 Jan 22 j 23:54	0°≈	
retrograde	-2411 Oct 09 j 10:29	17°♁58'49		evening set	-2405 Jan 27 j 02:41	3°≈05'37	
min. Earth dist.	-2411 Nov 15 j 09:24	9°♁17'02	0.64482 AU		-2405 Mar 04 j 16:46	0°♁	
opposition	-2411 Nov 18 j 12:22	8°♁01'51	1°50'55				
greatest brilliancy	-2411 Nov 18 j 04:21	8°♁09'53	-1.4m	conjunction	-2405 Mar 28 j 05:09	16°♁42'12	0°-32'-44
	-2411 Dec 13 j 18:01	30°♁		minimum elong	-2405 Mar 28 j 06:56	16°♁45'19	0°32'44
direct	-2411 Dec 27 j 13:36	28°Υ45'47			-2405 Apr 16 j 09:36	0°Υ	
	-2410 Jan 11 j 02:36	0°Ϡ		max. Earth dist.	-2405 Apr 30 j 10:03	9°Υ32'18	2.55388 AU
	-2410 Mar 28 j 19:12	0°Π		morning rise	-2405 May 22 j 04:21	24°Υ04'21	
	-2410 May 20 j 14:44	0°♄		asc. node	-2405 May 24 j 01:22	25°Υ18'39	
	-2410 Jul 07 j 03:54	0°♄			-2405 May 31 j 04:33	0°Ϡ	
	-2410 Aug 20 j 06:29	0°♄			-2405 Jul 16 j 22:12	0°Π	
evening set	-2410 Sep 19 j 17:32	21°♄53'19			-2405 Sep 03 j 15:38	0°♄	
	-2410 Sep 30 j 17:07	0°♄			-2405 Oct 25 j 18:16	0°♄	
max. Earth dist.	-2410 Oct 10 j 03:53	7°♄03'41	2.41158 AU		-2405 Dec 31 j 10:44	0°♄	
desc. node	-2410 Oct 13 j 08:46	9°♄28'21		retrograde	-2404 Jan 31 j 14:52	5°♄08'36	
	-2410 Nov 09 j 05:42	0°♄			-2404 Feb 29 j 13:39	30°♁	
				opposition	-2404 Mar 07 j 13:57	27°♄33'13	4°00'38
conjunction	-2410 Nov 16 j 02:12	5°♄18'31	0°-22'-58	greatest brilliancy	-2404 Mar 09 j 04:37	26°♄58'11	-1.8m

Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

min. Earth dist.	-2404 Mar 15 j 12:29	24° Ω 41'06	0.53988 AU
direct	-2404 Apr 16 j 04:07	18° Ω 19'46	
	-2404 Jun 01 j 00:38	0° \mathbb{M}	
desc. node	-2404 Jun 04 j 04:18	1° \mathbb{M} 26'50	
	-2404 Jul 23 j 14:30	0° $\underline{\Omega}$	
	-2404 Sep 04 j 07:09	0° \mathbb{M}	
	-2404 Oct 14 j 04:40	0° \mathbb{X}	
	-2404 Nov 22 j 12:08	0° $\overline{\Omega}$	
	-2403 Jan 01 j 12:15	0° \approx	
	-2403 Feb 12 j 00:06	0° \mathbb{X}	
evening set	-2403 Mar 22 j 10:05	26° \mathbb{X} 38'38	
	-2403 Mar 27 j 08:48	0° \mathbb{Y}	
asc. node	-2403 Apr 09 j 22:49	9° \mathbb{Y} 08'23	
	-2403 May 11 j 12:48	0° \mathbb{X}	
conjunction	-2403 May 13 j 08:55	1° \mathbb{X} 11'58	0°19'03
minimum elong	-2403 May 13 j 08:08	1° \mathbb{X} 10'41	0°19'04
max. Earth dist.	-2403 May 27 j 20:09	10° \mathbb{X} 35'34	2.63977 AU
	-2403 Jun 27 j 01:43	0° \mathbb{I}	
morning rise	-2403 Jun 30 j 13:25	2° \mathbb{I} 13'24	
	-2403 Aug 13 j 10:23	0° $\overline{\Omega}$	
	-2403 Sep 30 j 08:57	0° Ω	
	-2403 Nov 18 j 09:38	0° \mathbb{M}	
	-2402 Jan 09 j 22:40	0° $\underline{\Omega}$	
retrograde	-2402 Apr 02 j 22:46	28° $\underline{\Omega}$ 18'19	
desc. node	-2402 Apr 22 j 03:38	26° $\underline{\Omega}$ 04'19	
opposition	-2402 May 04 j 16:06	22° $\underline{\Omega}$ 42'03	0°-50'-2
greatest brilliancy	-2402 May 04 j 23:30	22° $\underline{\Omega}$ 36'33	-2.6m
min. Earth dist.	-2402 May 11 j 08:23	20° $\underline{\Omega}$ 43'49	0.41217 AU
direct	-2402 Jun 07 j 11:28	16° $\underline{\Omega}$ 10'12	
	-2402 Jul 26 j 08:42	0° \mathbb{M}	
	-2402 Sep 14 j 11:48	0° \mathbb{X}	
	-2402 Oct 27 j 23:41	0° $\overline{\Omega}$	
	-2402 Dec 09 j 15:02	0° \approx	
	-2401 Jan 22 j 00:43	0° \mathbb{X}	
asc. node	-2401 Feb 25 j 21:08	23° \mathbb{X} 26'36	
	-2401 Mar 07 j 18:50	0° \mathbb{Y}	
	-2401 Apr 22 j 20:44	0° \mathbb{X}	
evening set	-2401 May 05 j 02:16	7° \mathbb{X} 51'19	
	-2401 Jun 08 j 18:32	0° \mathbb{I}	
conjunction	-2401 Jun 21 j 17:15	8° \mathbb{I} 14'58	0°56'21
minimum elong	-2401 Jun 21 j 16:02	8° \mathbb{I} 13'02	0°56'24
max. Earth dist.	-2401 Jun 20 j 19:15	7° \mathbb{I} 39'55	2.67233 AU
	-2401 Jul 25 j 18:54	0° $\overline{\Omega}$	
morning rise	-2401 Aug 05 j 23:31	7° $\overline{\Omega}$ 10'36	
	-2401 Sep 10 j 07:19	0° Ω	
	-2401 Oct 26 j 01:16	0° \mathbb{M}	
	-2401 Dec 10 j 03:07	0° $\underline{\Omega}$	
desc. node	-2400 Jan 23 j 23:17	0° \mathbb{M}	
	-2400 Mar 09 j 04:01	29° \mathbb{M} 40'07	
	-2400 Mar 09 j 16:29	0° \mathbb{X}	
	-2400 Apr 30 j 03:52	0° $\overline{\Omega}$	
retrograde	-2400 Jun 20 j 09:17	14° $\overline{\Omega}$ 46'19	
min. Earth dist.	-2400 Jul 17 j 03:27	10° $\overline{\Omega}$ 20'22	0.39127 AU
greatest brilliancy	-2400 Jul 21 j 01:50	9° $\overline{\Omega}$ 12'58	-2.7m
opposition	-2400 Jul 22 j 13:42	8° $\overline{\Omega}$ 47'11	-6°-42'-51
direct	-2400 Aug 21 j 14:08	3° $\overline{\Omega}$ 33'01	
	-2400 Nov 05 j 16:23	0° \approx	
	-2400 Dec 26 j 20:28	0° \mathbb{X}	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 1

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

conjunction	-2399 Jul 27 j 23:48	13° \mathfrak{D} 50'27	1°10'36		-2394 Mar 12 j 10:52	0° \approx	
minimum elong	-2399 Jul 27 j 23:45	13° \mathfrak{D} 50'21	1°10'40		-2394 Apr 21 j 22:23	0° \mathfrak{H}	
	-2399 Aug 21 j 14:37	0° \mathfrak{Q}			-2394 Jun 03 j 23:00	0° Υ	
morning rise	-2399 Sep 11 j 10:05	13° \mathfrak{Q} 54'04			-2394 Jul 21 j 05:52	0° \mathfrak{B}	
	-2399 Oct 05 j 02:02	0° \mathfrak{M}		asc. node	-2394 Sep 04 j 18:21	24° \mathfrak{B} 16'06	
	-2399 Nov 16 j 23:40	0° \mathfrak{A}			-2394 Sep 18 j 06:33	0° \mathfrak{I}	
	-2399 Dec 28 j 13:16	0° \mathfrak{M}		retrograde	-2394 Oct 30 j 17:04	9° \mathfrak{I} 22'45	
desc. node	-2398 Jan 25 j 04:29	20° \mathfrak{M} 20'09			-2394 Dec 08 j 18:52	30° \mathfrak{R} \mathfrak{B}	
	-2398 Feb 07 j 05:37	0° \mathfrak{A}		opposition	-2394 Dec 09 j 18:55	29° \mathfrak{B} 35'54	3°15'59
	-2398 Mar 19 j 19:27	0° \mathfrak{C}		min. Earth dist.	-2394 Dec 08 j 23:23	29° \mathfrak{B} 55'28	0.66992 AU
	-2398 Apr 30 j 19:53	0° \approx		greatest brilliancy	-2394 Dec 09 j 14:10	29° \mathfrak{B} 40'39	-1.3m
	-2398 Jun 17 j 13:49	0° \mathfrak{H}		direct	-2393 Jan 19 j 02:09	19° \mathfrak{B} 54'20	
retrograde	-2398 Aug 16 j 08:39	19° \mathfrak{H} 31'35			-2393 Mar 05 j 18:23	0° \mathfrak{I}	
min. Earth dist.	-2398 Sep 15 j 10:37	13° \mathfrak{H} 19'46	0.50756 AU		-2393 May 05 j 22:41	0° \mathfrak{D}	
greatest brilliancy	-2398 Sep 21 j 23:39	10° \mathfrak{H} 54'05	-2.1m		-2393 Jun 24 j 09:09	0° \mathfrak{Q}	
opposition	-2398 Sep 23 j 04:11	10° \mathfrak{H} 27'33	-3°-10'-57		-2393 Aug 08 j 01:38	0° \mathfrak{M}	
direct	-2398 Oct 27 j 11:22	3° \mathfrak{H} 02'21		desc. node	-2393 Sep 16 j 23:50	28° \mathfrak{M} 47'22	
asc. node	-2398 Nov 30 j 18:37	9° \mathfrak{H} 28'06			-2393 Sep 18 j 14:56	0° \mathfrak{A}	
	-2397 Jan 16 j 07:12	0° Υ		evening set	-2393 Oct 25 j 04:19	27° \mathfrak{A} 45'46	
	-2397 Mar 11 j 13:07	0° \mathfrak{B}			-2393 Oct 28 j 01:42	0° \mathfrak{M}	
	-2397 Apr 30 j 21:30	0° \mathfrak{I}			-2393 Dec 05 j 08:53	0° \mathfrak{A}	
	-2397 Jun 18 j 02:31	0° \mathfrak{D}					
evening set	-2397 Jul 20 j 05:02	20° \mathfrak{D} 43'50		conjunction	-2393 Dec 28 j 04:23	17° \mathfrak{A} 59'33	0°-59'00
	-2397 Aug 03 j 05:31	0° \mathfrak{Q}		minimum elong	-2393 Dec 28 j 01:43	17° \mathfrak{A} 54'18	0°59'04
max. Earth dist.	-2397 Aug 09 j 10:48	4° \mathfrak{Q} 09'25	2.57691 AU		-2392 Jan 12 j 11:10	0° \mathfrak{C}	
				max. Earth dist.	-2392 Jan 30 j 07:27	13° \mathfrak{C} 54'17	2.38050 AU
conjunction	-2397 Sep 05 j 22:11	22° \mathfrak{Q} 51'49	0°55'21		-2392 Feb 20 j 06:21	0° \approx	
minimum elong	-2397 Sep 05 j 23:38	22° \mathfrak{Q} 54'19	0°55'22	morning rise	-2392 Mar 05 j 22:17	11° \approx 04'22	
	-2397 Sep 16 j 04:32	0° \mathfrak{M}			-2392 Mar 31 j 13:40	0° \mathfrak{H}	
morning rise	-2397 Oct 25 j 11:54	28° \mathfrak{M} 05'02			-2392 May 13 j 00:35	0° Υ	
	-2397 Oct 28 j 02:51	0° \mathfrak{A}			-2392 Jun 27 j 05:13	0° \mathfrak{B}	
	-2397 Dec 07 j 09:56	0° \mathfrak{M}		asc. node	-2392 Jul 22 j 17:38	15° \mathfrak{B} 59'26	
desc. node	-2397 Dec 13 j 02:55	4° \mathfrak{M} 19'31			-2392 Aug 15 j 05:53	0° \mathfrak{I}	
	-2396 Jan 15 j 15:44	0° \mathfrak{A}			-2392 Oct 12 j 15:26	0° \mathfrak{D}	
	-2396 Feb 23 j 14:05	0° \mathfrak{C}		retrograde	-2392 Dec 03 j 21:25	12° \mathfrak{D} 56'33	
	-2396 Apr 03 j 03:53	0° \approx		opposition	-2391 Jan 12 j 02:36	3° \mathfrak{D} 45'33	4°39'08
	-2396 May 14 j 16:04	0° \mathfrak{H}		greatest brilliancy	-2391 Jan 12 j 16:00	3° \mathfrak{D} 32'23	-1.3m
	-2396 Jun 29 j 12:29	0° Υ		min. Earth dist.	-2391 Jan 15 j 03:36	2° \mathfrak{D} 33'45	0.65964 AU
	-2396 Aug 31 j 17:41	0° \mathfrak{B}			-2391 Jan 21 j 20:30	30° \mathfrak{R} \mathfrak{I}	
retrograde	-2396 Sep 25 j 10:05	3° \mathfrak{B} 44'00		direct	-2391 Feb 22 j 09:46	23° \mathfrak{I} 44'36	
asc. node	-2396 Oct 17 j 17:54	0° \mathfrak{B} 15'32			-2391 Mar 28 j 17:35	0° \mathfrak{D}	
	-2396 Oct 18 j 14:02	30° \mathfrak{R} Υ			-2391 May 30 j 10:51	0° \mathfrak{Q}	
min. Earth dist.	-2396 Oct 30 j 15:41	25° Υ 37'12	0.61633 AU		-2391 Jul 16 j 20:27	0° \mathfrak{M}	
opposition	-2396 Nov 04 j 05:34	23° Υ 47'40	0°42'53	desc. node	-2391 Aug 03 j 22:22	12° \mathfrak{M} 29'04	
greatest brilliancy	-2396 Nov 04 j 00:54	23° Υ 52'19	-1.5m		-2391 Aug 28 j 06:05	0° \mathfrak{A}	
direct	-2396 Dec 12 j 05:15	14° Υ 54'03			-2391 Oct 06 j 23:07	0° \mathfrak{M}	
	-2395 Feb 07 j 21:07	0° \mathfrak{B}			-2391 Nov 14 j 08:36	0° \mathfrak{A}	
	-2395 Apr 07 j 19:04	0° \mathfrak{I}			-2391 Dec 22 j 13:20	0° \mathfrak{C}	
	-2395 May 28 j 12:56	0° \mathfrak{D}		evening set	-2390 Jan 01 j 03:29	7° \mathfrak{C} 27'51	
	-2395 Jul 14 j 11:15	0° \mathfrak{Q}			-2390 Jan 30 j 12:34	0° \approx	
	-2395 Aug 27 j 10:26	0° \mathfrak{M}					
evening set	-2395 Aug 31 j 06:55	2° \mathfrak{M} 43'05		conjunction	-2390 Mar 05 j 22:41	25° \approx 34'53	0°-51'-37
max. Earth dist.	-2395 Sep 15 j 07:44	13° \mathfrak{M} 27'24	2.46071 AU	minimum elong	-2390 Mar 06 j 01:09	25° \approx 39'24	0°51'39
	-2395 Oct 07 j 22:36	0° \mathfrak{A}			-2390 Mar 12 j 00:44	0° \mathfrak{H}	
				max. Earth dist.	-2390 Apr 16 j 09:56	25° \mathfrak{H} 03'45	2.50718 AU
conjunction	-2395 Oct 23 j 18:47	11° \mathfrak{A} 50'30	0°04'19		-2390 Apr 23 j 13:33	0° Υ	
minimum elong	-2395 Oct 23 j 19:04	11° \mathfrak{A} 51'03	0°04'18	morning rise	-2390 May 03 j 22:35	7° Υ 05'22	
behind sun begin	-2395 Oct 22 j 19:46	11° \mathfrak{A} 07'12			-2390 Jun 07 j 07:43	0° \mathfrak{B}	
behind sun end	-2395 Oct 24 j 18:22	12° \mathfrak{A} 34'57		asc. node	-2390 Jun 09 j 16:31	1° \mathfrak{B} 32'47	
desc. node	-2395 Oct 30 j 01:04	16° \mathfrak{A} 34'35			-2390 Jul 24 j 08:14	0° \mathfrak{I}	
	-2395 Nov 16 j 14:40	0° \mathfrak{M}			-2390 Sep 12 j 04:06	0° \mathfrak{D}	
morning rise	-2395 Dec 23 j 02:31	28° \mathfrak{M} 22'03			-2390 Nov 07 j 10:05	0° \mathfrak{Q}	
	-2395 Dec 25 j 04:34	0° \mathfrak{A}		retrograde	-2389 Jan 13 j 00:54	19° \mathfrak{Q} 09'48	
greatest brilliancy	-2394 Jan 20 j 10:28	20° \mathfrak{A} 34'01	1.2m	opposition	-2389 Feb 19 j 05:18	11° \mathfrak{Q} 00'10	4°38'02
	-2394 Feb 01 j 12:13	0° \mathfrak{C}		greatest brilliancy	-2389 Feb 20 j 16:29	10° \mathfrak{Q} 27'07	-1.6m

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 2

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

min. Earth dist.	-2389 Feb 26 j 00:06	8°♂27'34	0.58480 AU			-2384 May 27 j 06:25	0°♂	
direct	-2389 Mar 31 j 19:14	1°♂19'03		evening set		-2384 May 28 j 00:41	0°♂28'54	
	-2389 Jun 19 j 10:59	0°♂		max. Earth dist.		-2384 Jul 04 j 09:33	24°♂14'50	2.66552 AU
desc. node	-2389 Jun 21 j 20:26	1°♂24'28						
	-2389 Aug 04 j 18:47	0°♂		conjunction		-2384 Jul 13 j 11:32	0°♂04'11	1°08'11
	-2389 Sep 14 j 21:54	0°♂		minimum elong		-2384 Jul 13 j 10:54	0°♂03'10	1°08'15
	-2389 Oct 24 j 01:44	0°♂				-2384 Jul 13 j 08:55	0°♂	
	-2389 Dec 01 j 20:59	0°♂		morning rise		-2384 Aug 27 j 10:54	29°♂17'25	
	-2388 Jan 10 j 10:30	0°♂				-2384 Aug 28 j 12:46	0°♂	
	-2388 Feb 20 j 12:50	0°♂				-2384 Oct 12 j 09:26	0°♂	
evening set	-2388 Mar 02 j 17:05	7°♂55'49				-2384 Nov 24 j 22:39	0°♂	
	-2388 Apr 03 j 13:25	0°♂				-2383 Jan 06 j 09:30	0°♂	
				desc. node		-2383 Feb 10 j 20:45	25°♂26'09	
conjunction	-2388 Apr 26 j 09:00	15°♂22'39	0°00'-9			-2383 Feb 17 j 05:11	0°♂	
minimum elong	-2388 Apr 26 j 08:58	15°♂22'36	0°00'08			-2383 Mar 31 j 09:47	0°♂	
behind sun begin	-2388 Apr 25 j 11:38	14°♂47'01				-2383 May 15 j 19:56	0°♂	
behind sun end	-2388 Apr 27 j 06:18	15°♂58'09		retrograde		-2383 Jul 27 j 20:11	27°♂35'40	
asc. node	-2388 Apr 26 j 15:23	15°♂33'15		min. Earth dist.		-2383 Aug 24 j 20:47	22°♂15'59	0.45675 AU
max. Earth dist.	-2388 May 17 j 16:57	29°♂28'31	2.61230 AU	greatest brilliancy		-2383 Aug 31 j 03:35	20°♂05'56	-2.3m
	-2388 May 18 j 12:10	0°♂		opposition		-2383 Sep 01 j 22:36	19°♂28'37	-4°-57'-41
morning rise	-2388 Jun 15 j 15:38	18°♂15'04		direct		-2383 Oct 04 j 09:40	12°♂53'43	
	-2388 Jul 04 j 00:43	0°♂				-2383 Dec 03 j 05:01	0°♂	
	-2388 Aug 20 j 17:58	0°♂		asc. node		-2383 Dec 17 j 10:45	6°♂59'42	
	-2388 Oct 08 j 18:23	0°♂				-2382 Jan 28 j 10:05	0°♂	
	-2388 Nov 29 j 16:31	0°♂				-2382 Mar 20 j 05:16	0°♂	
	-2387 Feb 03 j 20:46	0°♂				-2382 May 08 j 08:16	0°♂	
retrograde	-2387 Mar 06 j 14:13	5°♂03'40				-2382 Jun 25 j 02:03	0°♂	
	-2387 Apr 04 j 17:37	30°♂		evening set		-2382 Jul 05 j 00:37	6°♂22'32	
opposition	-2387 Apr 09 j 00:39	28°♂37'12	1°45'19	max. Earth dist.		-2382 Jul 29 j 10:27	22°♂15'50	2.61161 AU
greatest brilliancy	-2387 Apr 09 j 22:39	28°♂19'07	-2.3m			-2382 Aug 10 j 03:06	0°♂	
min. Earth dist.	-2387 Apr 17 j 09:02	25°♂53'06	0.45989 AU					
desc. node	-2387 May 08 j 21:02	21°♂05'35		conjunction		-2382 Aug 20 j 18:30	7°♂07'04	1°05'15
direct	-2387 May 15 j 17:11	20°♂45'47		minimum elong		-2382 Aug 20 j 19:27	7°♂08'40	1°05'18
	-2387 Jun 23 j 19:59	0°♂				-2382 Sep 23 j 05:44	0°♂	
	-2387 Aug 15 j 19:07	0°♂		morning rise		-2382 Oct 07 j 02:30	9°♂42'30	
	-2387 Sep 27 j 16:07	0°♂				-2382 Nov 04 j 11:33	0°♂	
	-2387 Nov 07 j 14:59	0°♂				-2382 Dec 15 j 04:06	0°♂	
	-2387 Dec 18 j 19:10	0°♂		desc. node		-2382 Dec 29 j 19:45	11°♂00'58	
	-2386 Jan 30 j 05:06	0°♂				-2381 Jan 23 j 20:04	0°♂	
asc. node	-2386 Mar 14 j 12:35	29°♂29'54				-2381 Mar 04 j 04:54	0°♂	
	-2386 Mar 15 j 06:36	0°♂				-2381 Apr 13 j 07:39	0°♂	
evening set	-2386 Apr 19 j 00:48	22°♂55'47				-2381 May 25 j 21:29	0°♂	
	-2386 Apr 29 j 21:47	0°♂				-2381 Jul 14 j 12:04	0°♂	
				retrograde		-2381 Sep 11 j 12:46	18°♂12'37	
conjunction	-2386 Jun 06 j 22:47	24°♂28'26	0°44'18	min. Earth dist.		-2381 Oct 14 j 21:02	10°♂45'59	0.57931 AU
minimum elong	-2386 Jun 06 j 21:29	24°♂26'21	0°44'20	opposition		-2381 Oct 20 j 20:05	8°♂25'35	0°-37'-59
max. Earth dist.	-2386 Jun 11 j 16:25	27°♂29'58	2.66612 AU	greatest brilliancy		-2381 Oct 20 j 15:18	8°♂30'17	-1.7m
	-2386 Jun 15 j 14:25	0°♂		asc. node		-2381 Nov 04 j 10:06	3°♂15'51	
morning rise	-2386 Jul 22 j 23:14	23°♂48'52		direct		-2381 Nov 26 j 13:29	0°♂00'24	
	-2386 Aug 01 j 16:08	0°♂				-2380 Feb 22 j 16:43	0°♂	
	-2386 Sep 17 j 14:21	0°♂				-2380 Apr 16 j 14:50	0°♂	
	-2386 Nov 03 j 06:03	0°♂				-2380 Jun 05 j 01:46	0°♂	
	-2386 Dec 20 j 00:51	0°♂				-2380 Jul 21 j 14:25	0°♂	
	-2385 Feb 06 j 03:50	0°♂		evening set		-2380 Aug 13 j 13:54	15°♂29'01	
desc. node	-2385 Mar 26 j 21:37	27°♂10'28		max. Earth dist.		-2380 Aug 29 j 04:04	26°♂15'11	2.50997 AU
	-2385 Apr 01 j 20:41	0°♂				-2380 Sep 03 j 12:32	0°♂	
retrograde	-2385 May 22 j 07:36	13°♂32'22						
opposition	-2385 Jun 21 j 19:48	8°♂27'51	-5°-36'-26	conjunction		-2380 Oct 03 j 03:34	21°♂11'29	0°28'23
min. Earth dist.	-2385 Jun 21 j 07:27	8°♂36'05	0.37577 AU	minimum elong		-2380 Oct 03 j 04:56	21°♂13'58	0°28'22
greatest brilliancy	-2385 Jun 21 j 15:31	8°♂30'43	-2.9m			-2380 Oct 15 j 04:01	0°♂	
direct	-2385 Jul 21 j 19:36	3°♂28'06		desc. node		-2380 Nov 15 j 18:38	23°♂41'39	
	-2385 Oct 03 j 22:57	0°♂				-2380 Nov 24 j 01:00	0°♂	
	-2385 Nov 21 j 21:46	0°♂		morning rise		-2380 Nov 27 j 08:41	2°♂32'36	
	-2384 Jan 07 j 07:11	0°♂				-2379 Jan 01 j 19:55	0°♂	
asc. node	-2384 Jan 30 j 10:52	14°♂59'43				-2379 Feb 09 j 07:46	0°♂	
	-2384 Feb 22 j 18:16	0°♂				-2379 Mar 20 j 09:55	0°♂	
	-2384 Apr 09 j 20:19	0°♂				-2379 Apr 30 j 02:35	0°♂	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 3

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2379 Jun 12 j 17:09	0°Υ				-2374 Aug 14 j 08:59	0°♊		
	-2379 Aug 01 j 04:02	0°♋				-2374 Sep 23 j 16:57	0°♌		
asc. node	-2379 Sep 21 j 09:12	22°♋18'31				-2374 Nov 01 j 10:26	0°♍		
retrograde	-2379 Oct 17 j 06:59	26°♋13'43				-2374 Dec 09 j 21:37	0°♎		
min. Earth dist.	-2379 Nov 24 j 02:45	17°♋14'24	0.65641 AU			-2373 Jan 18 j 03:21	0°♏		
opposition	-2379 Nov 26 j 09:52	16°♋19'04	2°25'23	evening set		-2373 Feb 09 j 17:36	16°♏47'05		
greatest brilliancy	-2379 Nov 26 j 02:00	16°♋26'57	-1.3m			-2373 Feb 27 j 22:15	0°♐		
direct	-2378 Jan 04 j 22:43	6°♋52'34							
	-2378 Mar 21 j 04:47	0°♑		conjunction		-2373 Apr 08 j 18:42	28°♐00'13	0°-20'-46	
	-2378 May 15 j 00:59	0°♒		minimum elong		-2373 Apr 08 j 19:49	28°♐02'08	0°20'46	
	-2378 Jul 02 j 04:17	0°♓				-2373 Apr 11 j 16:32	0°♑		
	-2378 Aug 15 j 11:38	0°♐		max. Earth dist.		-2373 May 07 j 13:00	17°♑28'17	2.57685 AU	
	-2378 Sep 25 j 23:34	0°♑		asc. node		-2373 May 14 j 05:58	21°♑55'57		
evening set	-2378 Oct 01 j 20:14	4°♑22'22				-2373 May 26 j 11:41	0°♒		
desc. node	-2378 Oct 03 j 16:34	5°♑45'25		morning rise		-2373 May 31 j 20:28	3°♒30'39		
max. Earth dist.	-2378 Oct 31 j 23:31	27°♑17'30	2.38825 AU			-2373 Jul 12 j 02:07	0°♓		
	-2378 Nov 04 j 11:40	0°♒				-2373 Aug 29 j 08:27	0°♐		
						-2373 Oct 19 j 00:15	0°♑		
conjunction	-2378 Nov 30 j 15:18	20°♒23'18	0°-38'-10			-2373 Dec 15 j 20:40	0°♒		
minimum elong	-2378 Nov 30 j 12:37	20°♒18'01	0°38'12	retrograde		-2372 Feb 12 j 09:00	15°♒31'34		
	-2378 Dec 12 j 20:48	0°♓		opposition		-2372 Mar 18 j 11:42	8°♒18'35	3°23'50	
	-2377 Jan 20 j 00:25	0°♐		greatest brilliancy		-2372 Mar 20 j 00:23	7°♒46'13	-2.0m	
morning rise	-2377 Feb 06 j 09:41	13°♐32'36		min. Earth dist.		-2372 Mar 26 j 19:42	5°♒22'43	0.51224 AU	
	-2377 Feb 27 j 19:48	0°♑				-2372 Apr 17 j 11:39	30°♒♓		
	-2377 Apr 09 j 03:00	0°♒		direct		-2372 Apr 26 j 06:17	29°♒28'06		
	-2377 May 21 j 15:59	0°♓				-2372 May 05 j 03:07	0°♐		
	-2377 Jul 06 j 07:35	0°♋		desc. node		-2372 May 25 j 13:17	4°♐44'47		
asc. node	-2377 Aug 09 j 09:21	20°♋36'04				-2372 Jul 15 j 04:58	0°♑		
	-2377 Aug 26 j 04:19	0°♒				-2372 Aug 28 j 16:32	0°♒		
	-2377 Nov 19 j 03:57	0°♐				-2372 Oct 08 j 07:05	0°♓		
retrograde	-2377 Nov 20 j 22:19	0°♐01'10				-2372 Nov 17 j 00:48	0°♐		
	-2377 Nov 22 j 16:27	30°♒♑				-2372 Dec 27 j 08:10	0°♑		
opposition	-2377 Dec 30 j 14:47	20°♑33'30	4°15'09			-2371 Feb 07 j 01:45	0°♒		
greatest brilliancy	-2377 Dec 30 j 19:51	20°♑28'28	-1.2m			-2371 Mar 22 j 14:41	0°♓		
min. Earth dist.	-2376 Jan 01 j 03:33	19°♑56'59	0.67153 AU	asc. node		-2371 Mar 31 j 04:38	5°♓46'09		
direct	-2376 Feb 09 j 16:43	10°♑36'31		evening set		-2371 Apr 01 j 20:29	6°♓52'48		
	-2376 Apr 16 j 06:21	0°♐				-2371 May 06 j 21:21	0°♋		
	-2376 Jun 09 j 07:19	0°♑							
	-2376 Jul 25 j 05:29	0°♒		conjunction		-2371 May 22 j 13:56	10°♋11'09	0°29'09	
desc. node	-2376 Aug 20 j 15:38	18°♒38'53		minimum elong		-2371 May 22 j 12:52	10°♋09'24	0°29'10	
	-2376 Sep 05 j 04:08	0°♑		max. Earth dist.		-2371 Jun 02 j 12:29	17°♋14'13	2.65136 AU	
	-2376 Oct 14 j 17:06	0°♒				-2371 Jun 22 j 10:33	0°♑		
	-2376 Nov 22 j 00:29	0°♓		morning rise		-2371 Jul 08 j 20:32	10°♑27'30		
evening set	-2376 Dec 04 j 15:59	9°♓58'34				-2371 Aug 08 j 15:53	0°♐		
	-2376 Dec 30 j 03:11	0°♐				-2371 Sep 25 j 03:59	0°♑		
	-2375 Feb 06 j 23:39	0°♑				-2371 Nov 12 j 03:18	0°♒		
						-2371 Dec 31 j 19:24	0°♑		
conjunction	-2375 Feb 08 j 20:10	1°♑24'28	-1°-4'-19			-2370 Feb 26 j 13:44	0°♒		
minimum elong	-2375 Feb 08 j 21:42	1°♑27'22	1°04'22	desc. node		-2370 Apr 12 j 13:09	13°♒22'56		
	-2375 Mar 19 j 08:38	0°♒		retrograde		-2370 Apr 20 j 08:09	13°♒45'02		
max. Earth dist.	-2375 Mar 29 j 10:09	7°♒15'33	2.45552 AU	opposition		-2370 May 21 j 02:17	8°♒32'24	-2°-39'-7	
morning rise	-2375 Apr 13 j 09:33	17°♒53'40		greatest brilliancy		-2370 May 21 j 16:26	8°♒22'33	-2.8m	
	-2375 Apr 30 j 19:02	0°♓		min. Earth dist.		-2370 May 25 j 20:01	7°♒13'23	0.39185 AU	
	-2375 Jun 14 j 14:21	0°♋		direct		-2370 Jun 22 j 05:53	2°♒44'57		
asc. node	-2375 Jun 26 j 08:11	7°♋35'33				-2370 Sep 03 j 18:36	0°♓		
	-2375 Aug 01 j 02:14	0°♑				-2370 Oct 20 j 08:51	0°♐		
	-2375 Sep 21 j 16:45	0°♒				-2370 Dec 03 j 08:24	0°♑		
	-2375 Nov 28 j 03:17	0°♑				-2369 Jan 16 j 12:26	0°♒		
retrograde	-2375 Dec 27 j 09:38	4°♑35'02		asc. node		-2369 Feb 16 j 03:14	20°♒23'47		
	-2374 Jan 23 j 09:24	30°♒♐				-2369 Mar 02 j 17:51	0°♓		
opposition	-2374 Feb 03 j 13:15	25°♐57'25	4°51'15			-2369 Apr 18 j 02:37	0°♋		
greatest brilliancy	-2374 Feb 04 j 16:42	25°♐31'01	-1.4m	evening set		-2369 May 13 j 23:17	16°♋30'58		
min. Earth dist.	-2374 Feb 08 j 22:17	23°♐53'26	0.62180 AU			-2369 Jun 04 j 03:47	0°♑		
direct	-2374 Mar 16 j 16:30	16°♐01'33		max. Earth dist.		-2369 Jun 26 j 03:47	14°♑00'16	2.67213 AU	
	-2374 May 08 j 14:19	0°♑							
	-2374 Jul 01 j 08:29	0°♒		conjunction		-2369 Jun 30 j 01:38	16°♑29'54	1°01'46	
desc. node	-2374 Jul 08 j 14:44	4°♒41'15		minimum elong		-2369 Jun 30 j 00:34	16°♑28'12	1°01'49	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 4

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2369 Jul 21 j 04:27	0°☿		retrograde	-2364 Oct 03 j 13:40	12°♄27'49	
morning rise	-2369 Aug 14 j 02:24	15°♄23'57		asc. node	-2364 Oct 08 j 00:40	12°♄19'43	
	-2369 Sep 05 j 13:22	0°♂		min. Earth dist.	-2364 Nov 08 j 18:46	4°♄00'42	0.63328 AU
	-2369 Oct 20 j 22:51	0°♊		opposition	-2364 Nov 12 j 12:57	2°♄30'24	1°23'56
	-2369 Dec 04 j 09:36	0°♋		greatest brilliancy	-2364 Nov 12 j 05:37	2°♄37'44	-1.5m
	-2368 Jan 17 j 04:15	0°♌			-2364 Nov 18 j 22:13	30°♋♎	
desc. node	-2368 Feb 28 j 13:42	29°♌03'06		direct	-2364 Dec 21 j 02:53	23°♎23'37	
	-2368 Feb 29 j 23:15	0°♈			-2363 Jan 25 j 22:05	0°♄	
	-2368 Apr 15 j 20:22	0°♉			-2363 Apr 01 j 10:04	0°♊	
	-2368 Jun 19 j 16:24	0°♊			-2363 May 23 j 07:49	0°♄	
retrograde	-2368 Jul 05 j 02:47	1°♊38'53			-2363 Jul 09 j 15:49	0°♂	
	-2368 Jul 20 j 09:32	30°♋♎			-2363 Aug 22 j 18:12	0°♊	
min. Earth dist.	-2368 Jul 31 j 19:12	27°♄01'59	0.41053 AU	evening set	-2363 Sep 11 j 01:11	13°♊44'00	
greatest brilliancy	-2368 Aug 05 j 22:03	25°♄27'32	-2.6m	max. Earth dist.	-2363 Sep 27 j 20:24	25°♊59'07	2.43313 AU
opposition	-2368 Aug 07 j 18:42	24°♄52'49	-6°-24'-18		-2363 Oct 03 j 06:45	0°♋	
direct	-2368 Sep 07 j 13:49	19°♄12'40		desc. node	-2363 Oct 20 j 10:48	12°♋51'31	
	-2368 Oct 22 j 06:45	0°♊					
	-2368 Dec 19 j 04:53	0°♋		conjunction	-2363 Nov 05 j 13:59	25°♋08'38	0°-11'-5
asc. node	-2367 Jan 03 j 01:53	8°♋42'41		minimum elong	-2363 Nov 05 j 13:13	25°♋07'08	0°11'06
	-2367 Feb 07 j 10:07	0°♎		behind sun begin	-2363 Nov 04 j 18:33	24°♋31'22	
	-2367 Mar 28 j 06:31	0°♄		behind sun end	-2363 Nov 06 j 07:52	25°♋42'56	
	-2367 May 15 j 13:16	0°♊			-2363 Nov 11 j 21:32	0°♌	
evening set	-2367 Jun 20 j 05:01	22°♊29'21			-2363 Dec 20 j 09:25	0°♈	
	-2367 Jul 01 j 23:14	0°♄		morning rise	-2362 Jan 07 j 23:13	14°♈35'32	
max. Earth dist.	-2367 Jul 19 j 10:18	11°♄15'29	2.63877 AU		-2362 Jan 27 j 15:01	0°♉	
					-2362 Mar 07 j 11:27	0°♊	
conjunction	-2367 Aug 05 j 12:05	22°♄24'28	1°10'00		-2362 Apr 16 j 19:51	0°♋	
minimum elong	-2367 Aug 05 j 12:24	22°♄24'58	1°10'03		-2362 May 29 j 13:55	0°♎	
	-2367 Aug 17 j 00:04	0°♂			-2362 Jul 15 j 00:45	0°♄	
morning rise	-2367 Sep 20 j 10:26	23°♂11'32		asc. node	-2362 Aug 25 j 23:36	23°♄49'00	
	-2367 Sep 30 j 08:13	0°♊			-2362 Sep 07 j 11:49	0°♊	
	-2367 Nov 11 j 23:58	0°♋		retrograde	-2362 Nov 07 j 10:19	17°♊14'46	
	-2367 Dec 23 j 05:23	0°♌		opposition	-2362 Dec 17 j 09:51	7°♊33'51	3°40'45
desc. node	-2366 Jan 15 j 12:09	17°♌17'14		greatest brilliancy	-2362 Dec 17 j 08:05	7°♊35'38	-1.2m
	-2366 Feb 01 j 11:46	0°♈		min. Earth dist.	-2362 Dec 17 j 10:41	7°♊33'02	0.67336 AU
	-2366 Mar 13 j 12:47	0°♉			-2361 Jan 08 j 09:27	30°♋♎	
	-2366 Apr 23 j 14:31	0°♊		direct	-2361 Jan 27 j 00:53	27°♄45'33	
	-2366 Jun 07 j 10:51	0°♋			-2361 Feb 15 j 23:38	0°♊	
	-2366 Aug 15 j 03:09	0°♎			-2361 Apr 29 j 07:45	0°♄	
retrograde	-2366 Aug 26 j 08:57	0°♎52'25			-2361 Jun 19 j 00:30	0°♂	
	-2366 Sep 06 j 08:01	30°♋♎			-2361 Aug 03 j 02:37	0°♊	
min. Earth dist.	-2366 Sep 26 j 15:05	24°♋12'38	0.53460 AU	desc. node	-2361 Sep 07 j 08:56	25°♊14'32	
opposition	-2366 Oct 03 j 19:55	21°♋28'08	-2°-11'-59		-2361 Sep 13 j 19:30	0°♋	
greatest brilliancy	-2366 Oct 03 j 00:54	21°♋46'16	-1.9m		-2361 Oct 23 j 07:17	0°♌	
direct	-2366 Nov 08 j 01:42	13°♋39'10		evening set	-2361 Nov 08 j 12:05	12°♌37'10	
asc. node	-2366 Nov 21 j 01:10	14°♋41'20			-2361 Nov 30 j 14:30	0°♈	
	-2365 Jan 06 j 11:33	0°♎			-2360 Jan 07 j 16:37	0°♉	
	-2365 Mar 05 j 09:07	0°♄					
	-2365 Apr 25 j 17:40	0°♊		conjunction	-2360 Jan 13 j 03:12	4°♄15'27	-1°-5'-9
	-2365 Jun 13 j 08:16	0°♄		minimum elong	-2360 Jan 13 j 01:54	4°♄12'54	1°05'13
evening set	-2365 Jul 29 j 03:51	29°♄41'50			-2360 Feb 15 j 11:27	0°♊	
	-2365 Jul 29 j 14:46	0°♂		max. Earth dist.	-2360 Feb 29 j 20:39	10°♊52'06	2.40316 AU
max. Earth dist.	-2365 Aug 16 j 09:11	11°♂56'33	2.55459 AU	morning rise	-2360 Mar 20 j 17:39	25°♊36'23	
	-2365 Sep 11 j 13:36	0°♊			-2360 Mar 26 j 18:06	0°♋	
					-2360 May 08 j 03:17	0°♎	
conjunction	-2365 Sep 15 j 16:46	2°♊54'01	0°47'08		-2360 Jun 22 j 02:11	0°♄	
minimum elong	-2365 Sep 15 j 18:22	2°♊56'49	0°47'09	asc. node	-2360 Jul 12 j 23:16	13°♄16'52	
	-2365 Oct 23 j 09:35	0°♋			-2360 Aug 09 j 08:38	0°♊	
morning rise	-2365 Nov 05 j 23:21	10°♋01'35			-2360 Oct 03 j 03:45	0°♄	
	-2365 Dec 02 j 12:51	0°♌		retrograde	-2360 Dec 12 j 04:35	20°♄57'38	
desc. node	-2365 Dec 03 j 11:18	0°♌42'42		opposition	-2359 Jan 20 j 02:00	11°♄57'22	4°47'26
	-2364 Jan 10 j 14:17	0°♈		greatest brilliancy	-2359 Jan 20 j 20:28	11°♄39'20	-1.3m
	-2364 Feb 18 j 08:13	0°♉		min. Earth dist.	-2359 Jan 23 j 23:27	10°♄26'04	0.64892 AU
	-2364 Mar 28 j 16:28	0°♊		direct	-2359 Mar 02 j 09:40	1°♄56'10	
	-2364 May 08 j 18:52	0°♋			-2359 May 23 j 04:56	0°♂	
	-2364 Jun 22 j 11:33	0°♎			-2359 Jul 11 j 03:18	0°♊	
	-2364 Aug 15 j 23:02	0°♄		desc. node	-2359 Jul 25 j 07:01	9°♊35'09	

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2359 Aug 23 j 00:26	0°♄			-2354 Jul 28 j 01:00	0°♄		
	-2359 Oct 01 j 22:04	0°♌		morning rise	-2354 Jul 31 j 00:12	1°♄53'48		
	-2359 Nov 09 j 09:52	0°♏			-2354 Sep 12 j 17:36	0°♏		
	-2359 Dec 17 j 16:22	0°♑			-2354 Oct 28 j 20:38	0°♑		
evening set	-2358 Jan 16 j 02:02	22°♑41'15			-2354 Dec 13 j 14:33	0°♄		
	-2358 Jan 25 j 17:08	0°♐			-2353 Jan 28 j 14:24	0°♌		
	-2358 Mar 07 j 06:40	0°♏		desc. node	-2353 Mar 17 j 05:48	29°♌41'34		
					-2353 Mar 17 j 18:18	0°♏		
conjunction	-2358 Mar 18 j 21:42	8°♏20'34	0°-41'-13		-2353 May 23 j 17:09	0°♑		
minimum elong	-2358 Mar 18 j 23:54	8°♏24'29	0°41'15	retrograde	-2353 Jun 08 j 20:07	1°♑40'52		
	-2358 Apr 18 j 20:20	0°♑			-2353 Jun 24 j 22:26	30°♏♏		
max. Earth dist.	-2358 Apr 24 j 16:55	4°♑00'49	2.53376 AU	min. Earth dist.	-2353 Jul 06 j 12:43	27°♏10'31	0.38074 AU	
morning rise	-2358 May 14 j 13:59	17°♑26'24		greatest brilliancy	-2353 Jul 09 j 01:31	26°♏29'04	-2.8m	
asc. node	-2358 May 30 j 22:49	28°♑17'20		opposition	-2353 Jul 10 j 00:44	26°♏13'13	-6°-31'-40	
	-2358 Jun 02 j 13:24	0°♏		direct	-2353 Aug 08 j 16:53	21°♏12'34		
	-2358 Jul 19 j 08:24	0°♐			-2353 Sep 16 j 23:00	0°♑		
	-2358 Sep 06 j 10:41	0°♄			-2353 Nov 13 j 08:11	0°♐		
	-2358 Oct 29 j 21:08	0°♏			-2353 Dec 31 j 21:35	0°♏		
retrograde	-2357 Jan 23 j 08:00	28°♏29'58		asc. node	-2352 Jan 20 j 17:51	12°♏32'14		
opposition	-2357 Feb 28 j 20:35	20°♏38'22	4°19'32		-2352 Feb 17 j 08:10	0°♑		
greatest brilliancy	-2357 Mar 02 j 10:23	20°♏03'28	-1.7m		-2352 Apr 04 j 22:15	0°♏		
min. Earth dist.	-2357 Mar 08 j 07:42	17°♏53'24	0.56099 AU		-2352 May 22 j 14:33	0°♐		
direct	-2357 Apr 09 j 23:07	11°♏10'16		evening set	-2352 Jun 05 j 11:44	8°♐46'19		
	-2357 Jun 10 j 00:18	0°♑			-2352 Jul 08 j 19:27	0°♄		
desc. node	-2357 Jun 12 j 06:13	1°♑11'06		max. Earth dist.	-2352 Jul 09 j 20:30	0°♄40'11	2.65838 AU	
	-2357 Jul 29 j 03:28	0°♄						
	-2357 Sep 09 j 02:00	0°♌		conjunction	-2352 Jul 21 j 18:09	8°♄20'19	1°10'05	
	-2357 Oct 18 j 14:46	0°♏		minimum elong	-2352 Jul 21 j 17:50	8°♄19'48	1°10'09	
	-2357 Nov 26 j 15:55	0°♑			-2352 Aug 23 j 22:10	0°♏		
	-2356 Jan 05 j 10:01	0°♐		morning rise	-2352 Sep 04 j 21:53	7°♏57'04		
	-2356 Feb 15 j 16:12	0°♏			-2352 Oct 07 j 14:19	0°♑		
evening set	-2356 Mar 14 j 04:18	19°♏16'34			-2352 Nov 19 j 19:10	0°♄		
	-2356 Mar 29 j 19:58	0°♑			-2352 Dec 31 j 17:57	0°♌		
asc. node	-2356 Apr 16 j 20:36	12°♑09'05		desc. node	-2351 Feb 01 j 06:18	22°♌57'32		
					-2351 Feb 10 j 21:01	0°♏		
conjunction	-2356 May 06 j 06:13	25°♑01'05	0°11'14		-2351 Mar 24 j 00:34	0°♑		
minimum elong	-2356 May 06 j 05:42	25°♑00'15	0°11'15		-2351 May 06 j 01:03	0°♐		
behind sun begin	-2356 May 05 j 14:42	24°♑35'35			-2351 Jun 26 j 21:46	0°♏		
behind sun end	-2356 May 06 j 20:43	25°♑24'55		retrograde	-2351 Aug 08 j 07:18	10°♏55'09		
	-2356 May 13 j 20:26	0°♏		min. Earth dist.	-2351 Sep 06 j 09:36	5°♏07'16	0.48488 AU	
max. Earth dist.	-2356 May 23 j 17:10	6°♏25'59	2.62852 AU	greatest brilliancy	-2351 Sep 12 j 22:59	2°♏45'31	-2.2m	
morning rise	-2356 Jun 24 j 07:06	26°♏46'43		opposition	-2351 Sep 14 j 10:29	2°♏13'24	-3°-56'-54	
	-2356 Jun 29 j 08:12	0°♐			-2351 Sep 20 j 19:40	30°♏♏		
	-2356 Aug 15 j 19:48	0°♄		direct	-2351 Oct 17 j 22:55	25°♐09'33		
	-2356 Oct 03 j 03:57	0°♏			-2351 Nov 16 j 02:37	0°♏		
	-2356 Nov 22 j 05:08	0°♑		asc. node	-2351 Dec 07 j 16:17	7°♏59'40		
	-2355 Jan 17 j 03:58	0°♄			-2350 Jan 21 j 01:42	0°♑		
retrograde	-2355 Mar 21 j 09:51	18°♄06'00			-2350 Mar 14 j 14:33	0°♏		
opposition	-2355 Apr 22 j 22:27	12°♄07'18	0°23'59		-2350 May 03 j 09:28	0°♐		
greatest brilliancy	-2355 Apr 23 j 03:33	12°♄03'19	-2.5m		-2350 Jun 20 j 10:06	0°♄		
desc. node	-2355 Apr 29 j 05:49	10°♄09'31		evening set	-2350 Jul 13 j 15:38	14°♄56'41		
min. Earth dist.	-2355 Apr 30 j 15:32	9°♄43'56	0.43241 AU	max. Earth dist.	-2350 Aug 04 j 17:40	29°♄27'40	2.59342 AU	
direct	-2355 May 28 j 02:19	4°♄58'15			-2350 Aug 05 j 13:08	0°♏		
	-2355 Aug 05 j 09:33	0°♌						
	-2355 Sep 20 j 03:47	0°♏		conjunction	-2350 Aug 29 j 20:25	16°♏22'15	1°00'11	
	-2355 Nov 01 j 06:35	0°♑		minimum elong	-2350 Aug 29 j 21:40	16°♏24'24	1°00'14	
	-2355 Dec 13 j 03:17	0°♐			-2350 Sep 18 j 14:48	0°♑		
	-2354 Jan 25 j 00:08	0°♏		morning rise	-2350 Oct 17 j 07:04	20°♑17'30		
asc. node	-2354 Mar 04 j 18:49	26°♏16'14			-2350 Oct 30 j 17:20	0°♄		
	-2354 Mar 10 j 09:15	0°♑			-2350 Dec 10 j 05:14	0°♌		
	-2354 Apr 25 j 05:14	0°♏		desc. node	-2350 Dec 20 j 05:04	7°♌32'52		
evening set	-2354 Apr 28 j 07:50	2°♏00'26			-2349 Jan 18 j 15:33	0°♏		
	-2354 Jun 11 j 00:07	0°♐			-2349 Feb 26 j 18:03	0°♑		
					-2349 Apr 07 j 11:58	0°♐		
conjunction	-2354 Jun 15 j 11:15	2°♐50'48	0°51'42		-2349 May 19 j 07:30	0°♏		
minimum elong	-2354 Jun 15 j 09:58	2°♐48'45	0°51'44		-2349 Jul 05 j 04:49	0°♑		
max. Earth dist.	-2354 Jun 17 j 01:06	3°♐51'08	2.67058 AU	retrograde	-2349 Sep 20 j 05:29	27°♑42'45		

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 6

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

min. Earth dist.	-2349 Oct 24 j 15:12	19° Υ 52'51	0.60076 AU		-2344 Aug 31 j 03:40	0° Ω	
asc. node	-2349 Oct 25 j 15:15	19° Υ 29'09			-2344 Oct 09 j 19:45	0° \mathbb{M}	
opposition	-2349 Oct 29 j 19:46	17° Υ 49'17	0°10'34		-2344 Nov 17 j 04:26	0° \mathcal{A}	
greatest brilliancy	-2349 Oct 29 j 18:23	17° Υ 50'40	-1.6m	greatest brilliancy	-2344 Nov 19 j 01:48	1° \mathcal{A} 29'22	1.2m
direct	-2349 Dec 06 j 06:09	9° Υ 07'30		evening set	-2344 Dec 20 j 05:32	26° \mathcal{A} 00'31	
	-2348 Feb 14 j 10:15	0° \mathcal{B}			-2344 Dec 25 j 07:54	0° \mathcal{C}	
	-2348 Apr 10 j 21:19	0° \mathbb{I}			-2343 Feb 02 j 05:01	0° \approx	
	-2348 May 31 j 02:10	0° \mathcal{E}					
	-2348 Jul 16 j 21:21	0° Ω		conjunction	-2343 Feb 23 j 09:09	15° \approx 53'42	0°-58'-8
evening set	-2348 Aug 23 j 11:11	25° Ω 30'36		minimum elong	-2343 Feb 23 j 11:30	15° \approx 58'03	0°58'10
	-2348 Aug 29 j 21:16	0° \mathbb{M}			-2343 Mar 14 j 14:23	0° \mathcal{H}	
max. Earth dist.	-2348 Sep 07 j 08:55	5° \mathbb{M} 59'30	2.48311 AU	max. Earth dist.	-2343 Apr 09 j 06:34	18° \mathcal{H} 20'25	2.48441 AU
	-2348 Oct 10 j 11:57	0° Ω		morning rise	-2343 Apr 25 j 09:30	29° \mathcal{H} 33'54	
					-2343 Apr 26 j 00:40	0° Υ	
conjunction	-2348 Oct 14 j 12:41	2° Ω 59'06	0°15'12		-2343 Jun 09 j 17:33	0° \mathcal{B}	
minimum elong	-2348 Oct 14 j 13:33	3° Ω 00'41	0°15'10	asc. node	-2343 Jun 16 j 13:52	4° \mathcal{B} 27'30	
behind sun begin	-2348 Oct 14 j 04:56	2° Ω 44'43			-2343 Jul 26 j 20:59	0° \mathbb{I}	
behind sun end	-2348 Oct 14 j 22:10	3° Ω 16'40			-2343 Sep 15 j 06:38	0° \mathcal{E}	
desc. node	-2348 Nov 06 j 03:28	19° Ω 58'08			-2343 Nov 13 j 08:51	0° Ω	
	-2348 Nov 19 j 06:56	0° \mathbb{M}		retrograde	-2342 Jan 05 j 17:21	13° Ω 14'29	
morning rise	-2348 Dec 11 j 10:51	17° \mathbb{M} 07'20		opposition	-2342 Feb 12 j 08:32	4° Ω 51'46	4°45'38
	-2348 Dec 27 j 23:16	0° \mathcal{A}		greatest brilliancy	-2342 Feb 13 j 16:35	4° Ω 21'18	-1.5m
	-2347 Feb 04 j 08:37	0° \mathcal{C}		min. Earth dist.	-2342 Feb 18 j 12:44	2° Ω 31'02	0.60238 AU
	-2347 Mar 15 j 08:03	0° \approx			-2342 Feb 25 j 12:59	30° $\mathcal{R}\mathcal{E}$	
	-2347 Apr 24 j 20:09	0° \mathcal{H}		direct	-2342 Mar 25 j 05:26	25° \mathcal{E} 02'33	
	-2347 Jun 07 j 00:03	0° Υ			-2342 Apr 23 j 14:22	0° Ω	
	-2347 Jul 24 j 21:33	0° \mathcal{B}			-2342 Jun 24 j 05:55	0° \mathbb{M}	
asc. node	-2347 Sep 11 j 15:51	24° \mathcal{B} 27'07		desc. node	-2342 Jun 28 j 22:25	2° \mathbb{M} 53'21	
	-2347 Sep 27 j 16:04	0° \mathbb{I}			-2342 Aug 08 j 11:27	0° Ω	
retrograde	-2347 Oct 25 j 01:16	4° \mathbb{I} 17'16			-2342 Sep 18 j 06:21	0° \mathbb{M}	
	-2347 Nov 19 j 09:40	30° $\mathcal{R}\mathcal{B}$			-2342 Oct 27 j 05:24	0° \mathcal{A}	
min. Earth dist.	-2347 Dec 02 j 16:33	25° \mathcal{B} 01'50	0.66507 AU		-2342 Dec 04 j 20:33	0° \mathcal{C}	
opposition	-2347 Dec 04 j 03:44	24° \mathcal{B} 26'30	2°56'12		-2341 Jan 13 j 05:41	0° \approx	
greatest brilliancy	-2347 Dec 03 j 21:12	24° \mathcal{B} 33'04	-1.3m	evening set	-2341 Feb 22 j 11:51	29° \approx 32'15	
direct	-2346 Jan 13 j 02:51	14° \mathcal{B} 51'06			-2341 Feb 23 j 03:19	0° \mathcal{H}	
	-2346 Mar 12 j 04:06	0° \mathbb{I}			-2341 Apr 06 j 23:46	0° Υ	
	-2346 May 09 j 04:33	0° \mathcal{E}					
	-2346 Jun 27 j 02:22	0° Ω		conjunction	-2341 Apr 19 j 14:11	8° Υ 33'48	0°-8'-48
	-2346 Aug 10 j 16:17	0° \mathbb{M}		minimum elong	-2341 Apr 19 j 14:38	8° Υ 34'33	0°08'47
	-2346 Sep 21 j 06:10	0° Ω		behind sun begin	-2341 Apr 18 j 19:52	8° Υ 02'53	
desc. node	-2346 Sep 24 j 01:55	2° Ω 06'01		behind sun end	-2341 Apr 20 j 09:23	9° Υ 06'13	
evening set	-2346 Oct 14 j 16:13	17° Ω 38'19		asc. node	-2341 May 04 j 12:50	18° Υ 34'52	
	-2346 Oct 30 j 18:16	0° \mathbb{M}		max. Earth dist.	-2341 May 14 j 02:25	24° Υ 55'26	2.59739 AU
	-2346 Dec 08 j 02:25	0° \mathcal{A}			-2341 May 21 j 19:30	0° \mathcal{B}	
max. Earth dist.	-2346 Dec 11 j 13:48	2° \mathcal{A} 44'19	2.37445 AU	morning rise	-2341 Jun 10 j 00:35	12° \mathcal{B} 30'32	
					-2341 Jul 07 j 07:48	0° \mathbb{I}	
conjunction	-2346 Dec 15 j 21:57	6° \mathcal{A} 09'36	0°-51'-15		-2341 Aug 24 j 05:27	0° \mathcal{E}	
minimum elong	-2346 Dec 15 j 18:54	6° \mathcal{A} 03'34	0°51'18		-2341 Oct 12 j 19:52	0° Ω	
	-2345 Jan 15 j 04:59	0° \mathcal{C}			-2341 Dec 05 j 14:33	0° \mathbb{M}	
morning rise	-2345 Feb 22 j 18:34	29° \mathcal{C} 50'38		retrograde	-2340 Feb 25 j 01:26	26° \mathbb{M} 40'16	
	-2345 Feb 22 j 23:29	0° \approx		opposition	-2340 Mar 30 j 06:25	19° \mathbb{M} 52'00	2°33'30
	-2345 Apr 04 j 05:24	0° \mathcal{H}		greatest brilliancy	-2340 Mar 31 j 12:47	19° \mathbb{M} 26'06	-2.2m
	-2345 May 16 j 15:36	0° Υ		min. Earth dist.	-2340 Apr 07 j 17:54	16° \mathbb{M} 59'14	0.48327 AU
	-2345 Jun 30 j 22:19	0° \mathcal{B}		direct	-2340 May 06 j 23:00	11° \mathbb{M} 31'13	
asc. node	-2345 Jul 30 j 15:32	18° \mathcal{B} 24'27		desc. node	-2340 May 15 j 22:36	12° \mathbb{M} 04'17	
	-2345 Aug 19 j 12:04	0° \mathbb{I}			-2340 Jul 04 j 10:22	0° Ω	
	-2345 Oct 20 j 17:24	0° \mathcal{E}			-2340 Aug 21 j 06:15	0° \mathbb{M}	
retrograde	-2345 Nov 28 j 21:28	7° \mathcal{E} 52'15			-2340 Oct 01 j 22:36	0° \mathcal{A}	
	-2344 Jan 03 j 15:59	30° $\mathcal{R}\mathbb{I}$			-2340 Nov 11 j 06:12	0° \mathcal{C}	
opposition	-2344 Jan 07 j 08:07	28° \mathbb{I} 33'33	4°30'18		-2340 Dec 21 j 23:28	0° \approx	
greatest brilliancy	-2344 Jan 07 j 17:44	28° \mathbb{I} 24'02	-1.3m		-2339 Feb 02 j 00:26	0° \mathcal{H}	
min. Earth dist.	-2344 Jan 09 j 17:15	27° \mathbb{I} 37'03	0.66619 AU		-2339 Mar 17 j 19:03	0° Υ	
direct	-2344 Feb 17 j 13:21	18° \mathbb{I} 33'41		asc. node	-2339 Mar 21 j 10:27	2° Υ 26'35	
	-2344 Apr 06 j 00:25	0° \mathcal{E}		evening set	-2339 Apr 11 j 20:02	16° Υ 39'24	
	-2344 Jun 03 j 02:43	0° Ω			-2339 May 02 j 05:17	0° \mathcal{B}	
	-2344 Jul 19 j 21:39	0° \mathbb{M}					
desc. node	-2344 Aug 11 j 00:23	15° \mathbb{M} 24'22		conjunction	-2339 May 31 j 11:33	18° \mathcal{B} 53'54	0°38'18

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 7

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

minimum elong	-2339 May 31 j 10:19	18°♄51'54	0°38'20	retrograde	-2334 Sep 04 j 20:14	11°♃27'19	
max. Earth dist.	-2339 Jun 08 j 00:03	23°♄43'08	2.66062 AU	min. Earth dist.	-2334 Oct 07 j 06:26	4°♃20'24	0.56017 AU
	-2339 Jun 17 j 19:46	0°♂		opposition	-2334 Oct 13 j 18:57	1°♃48'25	-1°-16'-10
morning rise	-2339 Jul 16 j 23:44	18°♂34'57		greatest brilliancy	-2334 Oct 13 j 08:40	1°♃58'25	-1.8m
	-2339 Aug 03 j 22:42	0°♄			-2334 Oct 18 j 12:35	30°♄	
	-2339 Sep 20 j 02:34	0°♂		asc. node	-2334 Nov 11 j 07:25	24°♄01'01	
	-2339 Nov 06 j 06:58	0°♄		direct	-2334 Nov 18 j 21:00	23°♄38'14	
	-2339 Dec 24 j 03:03	0°♄			-2334 Dec 23 j 08:44	0°♃	
	-2338 Feb 12 j 17:52	0°♄			-2333 Feb 26 j 16:22	0°♄	
desc. node	-2338 Apr 02 j 23:13	23°♄30'41			-2333 Apr 20 j 09:43	0°♂	
	-2338 Apr 29 j 09:48	0°♄			-2333 Jun 08 j 12:16	0°♄	
retrograde	-2338 May 08 j 06:19	0°♄29'52			-2333 Jul 24 j 23:14	0°♂	
	-2338 May 17 j 02:31	30°♄		evening set	-2333 Aug 07 j 09:54	8°♂59'46	
opposition	-2338 Jun 07 j 15:17	25°♄28'54	-4°-27'-13	max. Earth dist.	-2333 Aug 24 j 01:10	20°♂20'19	2.53069 AU
greatest brilliancy	-2338 Jun 07 j 23:36	25°♄23'19	-2.9m		-2333 Sep 06 j 22:59	0°♄	
min. Earth dist.	-2338 Jun 09 j 15:03	24°♄56'49	0.37913 AU				
direct	-2338 Jul 08 j 09:43	20°♄14'48		conjunction	-2333 Sep 25 j 23:11	13°♄28'19	0°37'02
	-2338 Aug 18 j 00:24	0°♄		minimum elong	-2333 Sep 26 j 00:44	13°♄31'06	0°37'03
	-2338 Oct 11 j 09:05	0°♄			-2333 Oct 18 j 17:26	0°♄	
	-2338 Nov 26 j 12:22	0°♄		morning rise	-2333 Nov 18 j 06:02	22°♄47'08	
	-2337 Jan 10 j 17:36	0°♄		desc. node	-2333 Nov 23 j 20:32	27°♄02'08	
asc. node	-2337 Feb 06 j 08:14	17°♄29'30			-2333 Nov 27 j 18:00	0°♄	
	-2337 Feb 25 j 13:30	0°♃			-2332 Jan 05 j 16:00	0°♄	
	-2337 Apr 13 j 06:42	0°♄			-2332 Feb 13 j 06:10	0°♄	
evening set	-2337 May 22 j 16:24	25°♄01'38			-2332 Mar 23 j 10:06	0°♄	
	-2337 May 30 j 12:31	0°♂			-2332 May 03 j 04:58	0°♄	
max. Earth dist.	-2337 Jul 01 j 11:57	20°♂20'19	2.66957 AU		-2332 Jun 16 j 02:43	0°♃	
					-2332 Aug 05 j 22:10	0°♄	
conjunction	-2337 Jul 08 j 08:39	24°♂43'26	1°05'58	asc. node	-2332 Sep 28 j 06:28	19°♄47'42	
minimum elong	-2337 Jul 08 j 07:50	24°♂42'07	1°06'01	retrograde	-2332 Oct 11 j 13:08	20°♄54'01	
	-2337 Jul 16 j 14:21	0°♄		min. Earth dist.	-2332 Nov 17 j 15:50	12°♄08'21	0.64723 AU
morning rise	-2337 Aug 22 j 06:52	23°♄43'50		opposition	-2332 Nov 20 j 14:27	10°♄57'26	2°01'12
	-2337 Aug 31 j 20:44	0°♂		greatest brilliancy	-2332 Nov 20 j 06:11	11°♄05'44	-1.4m
	-2337 Oct 15 j 23:28	0°♄		direct	-2332 Dec 29 j 17:04	1°♄39'07	
	-2337 Nov 28 j 21:59	0°♄			-2331 Mar 25 j 10:05	0°♂	
	-2336 Jan 10 j 21:57	0°♄			-2331 May 17 j 22:06	0°♄	
desc. node	-2336 Feb 18 j 22:22	27°♄30'47			-2331 Jul 04 j 17:59	0°♂	
	-2336 Feb 22 j 11:08	0°♄			-2331 Aug 18 j 00:36	0°♄	
	-2336 Apr 05 j 19:59	0°♄		evening set	-2331 Sep 22 j 13:34	25°♄33'18	
	-2336 May 24 j 12:57	0°♄			-2331 Sep 28 j 13:54	0°♄	
retrograde	-2336 Jul 18 j 10:09	17°♄14'19		desc. node	-2331 Oct 10 j 18:37	9°♄06'39	
min. Earth dist.	-2336 Aug 14 j 16:50	12°♄16'27	0.43483 AU	max. Earth dist.	-2331 Oct 14 j 10:46	11°♄52'47	2.40681 AU
greatest brilliancy	-2336 Aug 20 j 14:46	10°♄19'35	-2.5m		-2331 Nov 07 j 04:04	0°♄	
opposition	-2336 Aug 22 j 12:53	9°♄41'21	-5°-40'-24				
direct	-2336 Sep 23 j 04:27	3°♄31'08		conjunction	-2331 Nov 19 j 09:13	9°♄28'05	0°-26'-47
	-2336 Dec 10 j 04:35	0°♄		minimum elong	-2331 Nov 19 j 07:17	9°♄24'18	0°26'48
asc. node	-2336 Dec 24 j 07:55	7°♄39'15			-2331 Dec 15 j 14:44	0°♄	
	-2335 Feb 01 j 03:47	0°♃			-2330 Jan 22 j 19:00	0°♄	
	-2335 Mar 22 j 23:58	0°♄		morning rise	-2330 Jan 24 j 11:26	1°♄19'05	
	-2335 May 10 j 17:41	0°♂			-2330 Mar 02 j 14:10	0°♄	
	-2335 Jun 27 j 08:29	0°♄			-2330 Apr 11 j 20:31	0°♄	
evening set	-2335 Jun 28 j 16:29	0°♄51'11			-2330 May 24 j 09:43	0°♃	
max. Earth dist.	-2335 Jul 25 j 05:48	18°♄01'23	2.62480 AU		-2330 Jul 09 j 06:07	0°♄	
	-2335 Aug 12 j 10:12	0°♂		asc. node	-2330 Aug 16 j 06:38	22°♄31'18	
					-2330 Aug 30 j 03:58	0°♂	
conjunction	-2335 Aug 14 j 03:51	1°♂09'11	1°07'51	retrograde	-2330 Nov 15 j 04:06	25°♂01'53	
minimum elong	-2335 Aug 14 j 04:32	1°♂10'19	1°07'53	opposition	-2330 Dec 24 j 23:59	15°♂27'58	4°02'00
	-2335 Sep 25 j 16:16	0°♄		greatest brilliancy	-2330 Dec 25 j 01:50	15°♂26'08	-1.2m
morning rise	-2335 Sep 29 j 18:21	2°♄50'10		min. Earth dist.	-2330 Dec 25 j 20:53	15°♂07'08	0.67359 AU
	-2335 Nov 07 j 03:06	0°♄		direct	-2329 Feb 03 j 21:19	5°♂34'14	
	-2335 Dec 18 j 01:45	0°♄			-2329 Apr 21 j 22:44	0°♄	
desc. node	-2334 Jan 05 j 21:20	14°♄04'25			-2329 Jun 13 j 10:42	0°♂	
	-2334 Jan 26 j 23:52	0°♄			-2329 Jul 29 j 01:20	0°♄	
	-2334 Mar 07 j 14:53	0°♄		desc. node	-2329 Aug 28 j 17:11	21°♄45'40	
	-2334 Apr 17 j 01:19	0°♄			-2329 Sep 08 j 22:25	0°♄	
	-2334 May 30 j 07:06	0°♄			-2329 Oct 18 j 11:36	0°♄	
	-2334 Jul 22 j 02:48	0°♃		evening set	-2329 Nov 23 j 16:07	28°♄19'38	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 8

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2329 Nov 25 j 19:01	0°♊				-2324 Nov 15 j 13:19	0°♎		
	-2328 Jan 02 j 21:05	0°♉				-2323 Jan 06 j 05:00	0°♊		
						-2323 Mar 17 j 06:34	0°♌		
conjunction	-2328 Jan 29 j 00:44	20°♉19'29	-1°-6'-25	retrograde		-2323 Apr 06 j 17:54	2°♌25'11		
minimum elong	-2328 Jan 29 j 01:10	20°♉20'19	1°06'30	desc. node		-2323 Apr 19 j 14:55	1°♌23'48		
	-2328 Feb 10 j 16:08	0°♊				-2323 Apr 26 j 17:18	30°♌♊		
max. Earth dist.	-2328 Mar 19 j 03:54	27°♊57'56	2.43174 AU	opposition		-2323 May 08 j 05:22	26°♊54'13	-1°-14'-55	
	-2328 Mar 21 j 22:53	0°♋		greatest brilliancy		-2323 May 08 j 15:37	26°♊46'44	-2.7m	
morning rise	-2328 Apr 03 j 13:43	9°♋06'27		min. Earth dist.		-2323 May 14 j 15:40	25°♊01'58	0.40777 AU	
	-2328 May 03 j 07:18	0°♌		direct		-2323 Jun 10 j 17:33	20°♊31'22		
	-2328 Jun 17 j 02:20	0°♍				-2323 Jul 20 j 06:09	0°♌		
asc. node	-2328 Jul 03 j 05:52	10°♍23'11				-2323 Sep 11 j 05:26	0°♊		
	-2328 Aug 03 j 19:29	0°♎				-2323 Oct 25 j 06:47	0°♉		
	-2328 Sep 25 j 09:43	0°♏				-2323 Dec 07 j 03:11	0°♊		
retrograde	-2328 Dec 20 j 18:20	29°♏07'26				-2322 Jan 19 j 14:48	0°♋		
opposition	-2327 Jan 28 j 06:28	20°♏19'10	4°51'06	asc. node		-2322 Feb 23 j 01:06	23°♋09'05		
greatest brilliancy	-2327 Jan 29 j 06:01	19°♏56'20	-1.4m			-2322 Mar 05 j 09:25	0°♌		
min. Earth dist.	-2327 Feb 01 j 23:46	18°♏29'19	0.63522 AU			-2322 Apr 20 j 11:17	0°♍		
direct	-2327 Mar 10 j 12:27	10°♏19'48		evening set		-2322 May 07 j 09:06	10°♍51'05		
	-2327 May 14 j 18:11	0°♎				-2322 Jun 06 j 09:09	0°♎		
	-2327 Jul 05 j 02:27	0°♏		max. Earth dist.		-2322 Jun 22 j 09:26	10°♎12'03	2.67247 AU	
desc. node	-2327 Jul 15 j 16:41	6°♏59'45							
	-2327 Aug 17 j 15:05	0°♊		conjunction		-2322 Jun 23 j 21:21	11°♎09'15	0°57'59	
	-2327 Sep 26 j 19:00	0°♌		minimum elong		-2322 Jun 23 j 20:10	11°♎07'23	0°58'02	
	-2327 Nov 04 j 09:50	0°♊				-2322 Jul 23 j 09:46	0°♏		
	-2327 Dec 12 j 18:15	0°♉		morning rise		-2322 Aug 08 j 02:01	10°♏03'29		
	-2326 Jan 20 j 20:47	0°♊				-2322 Sep 07 j 22:16	0°♎		
evening set	-2326 Jan 30 j 09:00	7°♊08'25				-2322 Oct 23 j 15:32	0°♏		
	-2326 Mar 02 j 11:54	0°♋				-2322 Dec 07 j 15:04	0°♊		
						-2321 Jan 21 j 06:02	0°♌		
conjunction	-2326 Mar 31 j 02:19	20°♋17'42	0°-29'-36	desc. node		-2321 Mar 07 j 15:32	0°♊07'15		
minimum elong	-2326 Mar 31 j 03:56	20°♋20'31	0°29'37			-2321 Mar 07 j 11:03	0°♊		
	-2326 Apr 14 j 02:44	0°♌				-2321 Apr 25 j 23:08	0°♉		
max. Earth dist.	-2326 May 02 j 07:52	12°♌23'23	2.55856 AU	retrograde		-2321 Jun 24 j 19:59	19°♉21'35		
asc. node	-2326 May 21 j 03:23	24°♌56'33		min. Earth dist.		-2321 Jul 21 j 13:46	14°♉53'58	0.39425 AU	
morning rise	-2326 May 24 j 16:04	27°♌16'19		greatest brilliancy		-2321 Jul 25 j 17:20	13°♉41'43	-2.7m	
	-2326 May 28 j 19:35	0°♍		opposition		-2321 Jul 27 j 07:15	13°♉13'56	-6°-42'-9	
	-2326 Jul 14 j 10:44	0°♎		direct		-2321 Aug 26 j 11:30	7°♉55'31		
	-2326 Aug 31 j 23:41	0°♏				-2321 Nov 02 j 11:40	0°♊		
	-2326 Oct 22 j 13:53	0°♎				-2321 Dec 24 j 20:33	0°♋		
	-2326 Dec 24 j 10:15	0°♏		asc. node		-2320 Jan 10 j 23:34	10°♋26'23		
retrograde	-2325 Feb 03 j 09:14	8°♏22'25				-2320 Feb 11 j 15:29	0°♌		
opposition	-2325 Mar 11 j 03:29	0°♏51'07	3°51'26			-2320 Mar 30 j 20:58	0°♍		
greatest brilliancy	-2325 Mar 12 j 17:37	0°♏16'39	-1.9m			-2320 May 17 j 21:01	0°♎		
	-2325 Mar 13 j 11:58	30°♏♊		evening set		-2320 Jun 13 j 22:35	17°♎04'43		
min. Earth dist.	-2325 Mar 19 j 03:13	27°♏58'21	0.53485 AU			-2320 Jul 04 j 04:55	0°♏		
direct	-2325 Apr 19 j 13:45	21°♏41'15		max. Earth dist.		-2320 Jul 15 j 09:42	7°♏12'11	2.64853 AU	
	-2325 May 27 j 10:26	0°♏							
desc. node	-2325 Jun 02 j 15:27	2°♏36'05		conjunction		-2320 Jul 30 j 04:04	16°♏46'50	1°10'34	
	-2325 Jul 21 j 16:04	0°♊		minimum elong		-2320 Jul 30 j 04:06	16°♏46'54	1°10'37	
	-2325 Sep 02 j 20:32	0°♌				-2320 Aug 19 j 07:11	0°♎		
	-2325 Oct 12 j 22:24	0°♊		morning rise		-2320 Sep 13 j 16:17	16°♎57'57		
	-2325 Nov 21 j 07:24	0°♉				-2320 Oct 02 j 19:39	0°♏		
	-2325 Dec 31 j 07:30	0°♊				-2320 Nov 14 j 17:42	0°♊		
	-2324 Feb 10 j 18:23	0°♋				-2320 Dec 26 j 07:02	0°♌		
evening set	-2324 Mar 25 j 01:17	29°♋59'14		desc. node		-2319 Jan 22 j 14:19	20°♌06'49		
	-2324 Mar 25 j 01:44	0°♌				-2319 Feb 04 j 22:06	0°♊		
asc. node	-2324 Apr 07 j 02:08	8°♌46'18				-2319 Mar 17 j 08:56	0°♉		
	-2324 May 09 j 04:22	0°♍				-2319 Apr 28 j 01:51	0°♊		
						-2319 Jun 13 j 16:37	0°♋		
conjunction	-2324 May 15 j 18:06	4°♍17'15	0°21'56	retrograde		-2319 Aug 18 j 21:30	23°♋02'12		
minimum elong	-2324 May 15 j 17:13	4°♍15'49	0°21'58	min. Earth dist.		-2319 Sep 18 j 03:49	16°♋45'08	0.51267 AU	
max. Earth dist.	-2324 May 29 j 13:28	13°♍14'16	2.64219 AU	opposition		-2319 Sep 25 j 19:11	13°♋54'13	-2°-55'-59	
	-2324 Jun 24 j 16:08	0°♎		greatest brilliancy		-2319 Sep 24 j 17:05	14°♋18'38	-2.0m	
morning rise	-2324 Jul 02 j 17:34	5°♎08'24		direct		-2319 Oct 30 j 07:32	6°♋24'11		
	-2324 Aug 10 j 23:29	0°♏		asc. node		-2319 Nov 27 j 22:37	11°♋02'39		
	-2324 Sep 27 j 19:24	0°♎				-2318 Jan 12 j 13:23	0°♌		

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 9

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2318 Mar 08 j 16:40	0°♄		conjunction	-2314 Dec 31 j 17:06	22°♂21'07	-1°00'-49
	-2318 Apr 28 j 07:58	0°♂		minimum elong	-2314 Dec 31 j 14:42	22°♂16'25	1°00'53
	-2318 Jun 15 j 16:52	0°♄			-2313 Jan 10 j 10:43	0°♄	
evening set	-2318 Jul 22 j 10:32	23°♄42'44		max. Earth dist.	-2313 Feb 06 j 19:27	21°♄16'50	2.38385 AU
	-2318 Jul 31 j 22:45	0°♂			-2313 Feb 18 j 04:33	0°♄	
max. Earth dist.	-2318 Aug 11 j 07:55	6°♂56'18	2.57273 AU	morning rise	-2313 Mar 10 j 09:10	15°♄14'11	
					-2313 Mar 30 j 09:36	0°♄	
conjunction	-2318 Sep 08 j 07:18	26°♂02'24	0°53'20		-2313 May 11 j 17:24	0°♄	
minimum elong	-2318 Sep 08 j 08:47	26°♂04'59	0°53'21		-2313 Jun 25 j 17:29	0°♄	
	-2318 Sep 13 j 23:54	0°♄		asc. node	-2313 Jul 20 j 20:44	15°♄51'12	
	-2318 Oct 25 j 23:32	0°♄			-2313 Aug 13 j 09:06	0°♂	
morning rise	-2318 Oct 28 j 04:21	1°♄36'35			-2313 Oct 09 j 04:49	0°♄	
	-2318 Dec 05 j 07:09	0°♄		retrograde	-2313 Dec 07 j 00:35	15°♄46'52	
desc. node	-2318 Dec 10 j 13:12	3°♄58'44		opposition	-2312 Jan 15 j 04:13	6°♄37'58	4°41'32
	-2317 Jan 13 j 12:41	0°♄		greatest brilliancy	-2312 Jan 15 j 18:43	6°♄23'43	-1.3m
	-2317 Feb 21 j 09:57	0°♄		min. Earth dist.	-2312 Jan 18 j 09:32	5°♄21'56	0.65794 AU
	-2317 Apr 01 j 21:26	0°♄			-2312 Feb 02 j 13:37	30°♄	
	-2317 May 13 j 04:46	0°♄		direct	-2312 Feb 25 j 11:15	26°♄36'33	
	-2317 Jun 27 j 12:39	0°♄			-2312 Mar 21 j 01:23	0°♄	
	-2317 Aug 25 j 11:37	0°♄			-2312 May 27 j 09:52	0°♂	
retrograde	-2317 Sep 28 j 13:47	6°♄43'25			-2312 Jul 14 j 09:21	0°♄	
asc. node	-2317 Oct 15 j 22:23	4°♄36'15		desc. node	-2312 Aug 01 j 08:58	12°♄19'59	
	-2317 Oct 30 j 05:42	30°♄			-2312 Aug 26 j 00:42	0°♄	
min. Earth dist.	-2317 Nov 02 j 23:54	28°♄32'01	0.61984 AU		-2312 Oct 04 j 20:35	0°♄	
opposition	-2317 Nov 07 j 09:13	26°♄46'48	0°54'41		-2312 Nov 12 j 07:13	0°♄	
greatest brilliancy	-2317 Nov 07 j 03:32	26°♄52'29	-1.5m		-2312 Dec 20 j 11:56	0°♄	
direct	-2317 Dec 15 j 10:51	17°♄50'29		evening set	-2311 Jan 04 j 14:11	11°♄44'06	
	-2316 Feb 04 j 04:40	0°♄			-2311 Jan 28 j 10:14	0°♄	
	-2316 Apr 04 j 20:05	0°♂					
	-2316 May 25 j 23:55	0°♄		conjunction	-2311 Mar 09 j 01:17	29°♄24'47	0°-49'-8
	-2316 Jul 12 j 03:25	0°♂		minimum elong	-2311 Mar 09 j 03:44	29°♄29'14	0°49'09
	-2316 Aug 25 j 06:05	0°♄			-2311 Mar 09 j 20:42	0°♄	
evening set	-2316 Sep 02 j 18:39	6°♄00'53		max. Earth dist.	-2311 Apr 18 j 11:47	28°♄03'32	2.51225 AU
max. Earth dist.	-2316 Sep 18 j 02:00	16°♄59'17	2.45551 AU		-2311 Apr 21 j 07:17	0°♄	
	-2316 Oct 05 j 20:35	0°♄		morning rise	-2311 May 06 j 14:19	10°♄26'43	
					-2311 Jun 04 j 22:42	0°♄	
conjunction	-2316 Oct 26 j 15:30	15°♄33'22	0°00'38	asc. node	-2311 Jun 06 j 20:10	1°♄14'29	
minimum elong	-2316 Oct 26 j 15:33	15°♄33'28	0°00'36		-2311 Jul 21 j 19:28	0°♂	
behind sun begin	-2316 Oct 25 j 15:34	14°♄48'09			-2311 Sep 09 j 07:53	0°♄	
behind sun end	-2316 Oct 27 j 15:32	16°♄18'50			-2311 Nov 03 j 11:23	0°♂	
desc. node	-2316 Oct 27 j 13:04	16°♄14'08		retrograde	-2310 Jan 15 j 12:48	22°♂13'22	
	-2316 Nov 14 j 13:53	0°♄		opposition	-2310 Feb 21 j 13:32	14°♂07'00	4°33'05
	-2316 Dec 23 j 03:56	0°♄		greatest brilliancy	-2310 Feb 23 j 01:12	13°♂33'32	-1.6m
morning rise	-2316 Dec 26 j 14:13	2°♄41'15		min. Earth dist.	-2310 Feb 28 j 11:12	11°♂31'55	0.58062 AU
greatest brilliancy	-2315 Jan 07 j 19:10	12°♄15'47	1.2m	direct	-2310 Apr 03 j 01:25	4°♂27'34	
	-2315 Jan 30 j 10:45	0°♄			-2310 Jun 16 j 02:13	0°♄	
	-2315 Mar 10 j 07:38	0°♄		desc. node	-2310 Jun 19 j 08:06	1°♄51'26	
	-2315 Apr 19 j 16:14	0°♄			-2310 Aug 02 j 05:45	0°♄	
	-2315 Jun 01 j 12:05	0°♄			-2310 Sep 12 j 15:19	0°♄	
	-2315 Jul 18 j 08:44	0°♄			-2310 Oct 21 j 21:37	0°♄	
asc. node	-2315 Sep 01 j 21:31	24°♄51'09			-2310 Nov 29 j 17:25	0°♄	
	-2315 Sep 13 j 07:09	0°♂			-2309 Jan 08 j 06:20	0°♄	
retrograde	-2315 Nov 01 j 18:37	12°♄12'29			-2309 Feb 18 j 07:23	0°♄	
opposition	-2315 Dec 11 j 19:33	2°♄26'44	3°23'25	evening set	-2309 Mar 06 j 12:33	11°♄29'19	
min. Earth dist.	-2315 Dec 11 j 04:24	2°♄41'55	0.67098 AU		-2309 Apr 02 j 06:25	0°♄	
greatest brilliancy	-2315 Dec 11 j 15:20	2°♄30'58	-1.3m	asc. node	-2309 Apr 24 j 18:25	15°♄11'22	
	-2315 Dec 17 j 23:39	30°♄					
direct	-2314 Jan 21 j 03:32	22°♄43'39		conjunction	-2309 Apr 29 j 20:53	18°♄35'28	0°03'01
	-2314 Feb 28 j 01:47	0°♂		minimum elong	-2309 Apr 29 j 20:46	18°♄35'16	0°03'03
	-2314 May 02 j 22:40	0°♄		behind sun begin	-2309 Apr 28 j 23:30	17°♄59'54	
	-2314 Jun 21 j 21:12	0°♂		behind sun end	-2309 Apr 30 j 18:03	19°♄10'37	
	-2314 Aug 05 j 19:26	0°♄			-2309 May 17 j 03:35	0°♄	
desc. node	-2314 Sep 14 j 11:07	28°♄29'12		max. Earth dist.	-2309 May 20 j 07:53	2°♄04'57	2.61561 AU
	-2314 Sep 16 j 12:09	0°♄		morning rise	-2309 Jun 18 j 21:24	21°♄13'58	
	-2314 Oct 26 j 00:53	0°♄			-2309 Jul 02 j 14:29	0°♂	
evening set	-2314 Oct 28 j 07:48	1°♄46'19			-2309 Aug 19 j 05:19	0°♄	
	-2314 Dec 03 j 08:48	0°♄			-2309 Oct 07 j 00:35	0°♂	

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2309 Nov 27 j 08:07	0°♎		asc. node	-2304 Dec 14 j 13:47	7°♎37'19	
	-2308 Jan 28 j 04:11	0°♏			-2303 Jan 25 j 07:24	0°♐	
retrograde	-2308 Mar 09 j 19:56	8°♏47'46			-2303 Mar 17 j 12:40	0°♑	
opposition	-2308 Apr 12 j 03:38	2°♏26'08	1°26'31		-2303 May 05 j 20:02	0°♒	
greatest brilliancy	-2308 Apr 12 j 21:50	2°♏11'18	-2.3m		-2303 Jun 22 j 16:41	0°♓	
	-2308 Apr 19 j 15:37	30°♎		evening set	-2303 Jul 07 j 05:00	9°♓18'19	
min. Earth dist.	-2308 Apr 20 j 10:10	29°♎45'23	0.45472 AU	max. Earth dist.	-2303 Jul 31 j 07:26	25°♓01'10	2.60849 AU
desc. node	-2308 May 06 j 07:42	25°♎45'03			-2303 Aug 07 j 20:06	0°♈	
direct	-2308 May 18 j 12:37	24°♎42'26					
	-2308 Jun 16 j 11:00	0°♏		conjunction	-2303 Aug 23 j 00:15	10°♈09'00	1°04'02
	-2308 Aug 12 j 13:36	0°♎		minimum elong	-2303 Aug 23 j 01:16	10°♈10'44	1°04'04
	-2308 Sep 25 j 01:12	0°♏			-2303 Sep 21 j 00:42	0°♎	
	-2308 Nov 05 j 05:09	0°♑		morning rise	-2303 Oct 09 j 12:28	12°♎57'32	
	-2308 Dec 16 j 11:07	0°♒			-2303 Nov 02 j 07:51	0°♏	
	-2307 Jan 27 j 21:14	0°♑			-2303 Dec 13 j 00:59	0°♎	
asc. node	-2307 Mar 11 j 16:28	29°♑10'20		desc. node	-2303 Dec 27 j 06:56	10°♎42'38	
	-2307 Mar 12 j 22:10	0°♐			-2302 Jan 21 j 16:39	0°♏	
evening set	-2307 Apr 21 j 09:27	26°♐00'48			-2302 Mar 01 j 23:56	0°♑	
	-2307 Apr 27 j 12:42	0°♑			-2302 Apr 10 j 23:10	0°♒	
					-2302 May 23 j 04:51	0°♑	
conjunction	-2307 Jun 09 j 03:35	27°♑24'32	0°46'28		-2302 Jul 10 j 15:05	0°♐	
minimum elong	-2307 Jun 09 j 02:17	27°♑22'27	0°46'31	retrograde	-2302 Sep 13 j 20:27	21°♐24'52	
max. Earth dist.	-2307 Jun 13 j 09:38	0°♒07'27	2.66715 AU	min. Earth dist.	-2302 Oct 17 j 09:23	13°♐52'59	0.58356 AU
	-2307 Jun 13 j 04:58	0°♒		opposition	-2302 Oct 23 j 04:14	11°♐36'09	0°-24'-14
morning rise	-2307 Jul 25 j 01:27	26°♒40'48		greatest brilliancy	-2302 Oct 23 j 01:12	11°♐39'08	-1.7m
	-2307 Jul 30 j 06:24	0°♓		asc. node	-2302 Nov 01 j 12:31	8°♐05'45	
	-2307 Sep 15 j 03:49	0°♈		direct	-2302 Nov 29 j 00:15	3°♐07'31	
	-2307 Oct 31 j 17:03	0°♎			-2301 Feb 19 j 04:11	0°♑	
	-2307 Dec 17 j 05:58	0°♏			-2301 Apr 14 j 20:18	0°♒	
	-2306 Feb 02 j 18:50	0°♎			-2301 Jun 03 j 14:05	0°♓	
desc. node	-2306 Mar 24 j 07:02	28°♎32'24			-2301 Jul 20 j 06:51	0°♈	
	-2306 Mar 27 j 03:34	0°♏		evening set	-2301 Aug 16 j 23:19	18°♈39'29	
retrograde	-2306 May 26 j 08:38	18°♏21'36		max. Earth dist.	-2301 Sep 01 j 10:52	29°♈23'14	2.50494 AU
opposition	-2306 Jun 25 j 22:20	13°♏14'12	-5°-53'-19		-2301 Sep 02 j 07:53	0°♎	
min. Earth dist.	-2306 Jun 24 j 18:39	13°♏32'36	0.37612 AU				
greatest brilliancy	-2306 Jun 25 j 14:19	13°♏19'32	-2.9m	conjunction	-2301 Oct 06 j 19:07	24°♎40'25	0°25'10
direct	-2306 Jul 25 j 17:28	8°♏15'52		minimum elong	-2301 Oct 06 j 20:22	24°♎42'44	0°25'09
	-2306 Sep 29 j 13:07	0°♑			-2301 Oct 14 j 01:19	0°♏	
	-2306 Nov 18 j 20:25	0°♒		desc. node	-2301 Nov 14 j 05:20	23°♏19'39	
	-2305 Jan 04 j 15:10	0°♑			-2301 Nov 22 j 23:27	0°♎	
asc. node	-2305 Jan 27 j 15:14	14°♑50'22		morning rise	-2301 Dec 01 j 12:03	6°♎32'10	
	-2305 Feb 20 j 05:49	0°♐			-2301 Dec 31 j 18:42	0°♏	
	-2305 Apr 08 j 09:27	0°♑			-2300 Feb 08 j 05:59	0°♑	
	-2305 May 25 j 20:40	0°♒			-2300 Mar 18 j 06:32	0°♒	
evening set	-2305 May 31 j 05:04	3°♒23'07			-2300 Apr 27 j 20:02	0°♑	
max. Earth dist.	-2305 Jul 06 j 21:25	26°♒43'08	2.66443 AU		-2300 Jun 10 j 04:15	0°♐	
	-2305 Jul 12 j 00:18	0°♓			-2300 Jul 28 j 21:38	0°♑	
				asc. node	-2300 Sep 18 j 12:53	23°♑43'26	
conjunction	-2305 Jul 16 j 14:33	2°♓56'59	1°08'50	retrograde	-2300 Oct 19 j 09:09	29°♑06'16	
minimum elong	-2305 Jul 16 j 14:01	2°♓56'07	1°08'54	min. Earth dist.	-2300 Nov 26 j 08:08	20°♑03'35	0.65826 AU
	-2305 Aug 27 j 05:13	0°♈		opposition	-2300 Nov 28 j 11:06	19°♑12'18	2°34'40
morning rise	-2305 Aug 30 j 14:08	2°♈13'20		greatest brilliancy	-2300 Nov 28 j 03:16	19°♑20'11	-1.3m
	-2305 Oct 11 j 02:28	0°♎		direct	-2299 Jan 07 j 01:12	9°♑44'01	
	-2305 Nov 23 j 15:19	0°♏			-2299 Mar 17 j 09:47	0°♒	
	-2304 Jan 05 j 00:34	0°♎			-2299 May 12 j 06:39	0°♓	
desc. node	-2304 Feb 09 j 07:38	25°♎23'31			-2299 Jun 29 j 18:22	0°♈	
	-2304 Feb 15 j 16:51	0°♏			-2299 Aug 13 j 06:28	0°♎	
	-2304 Mar 28 j 14:16	0°♑			-2299 Sep 23 j 21:16	0°♏	
	-2304 May 12 j 03:57	0°♒		desc. node	-2299 Oct 01 j 03:42	5°♏24'54	
	-2304 Jul 15 j 13:47	0°♑		evening set	-2299 Oct 04 j 18:00	8°♏06'42	
retrograde	-2304 Jul 30 j 17:12	1°♑36'31			-2299 Nov 02 j 10:55	0°♎	
	-2304 Aug 14 j 14:12	30°♎		max. Earth dist.	-2299 Nov 07 j 02:44	3°♎36'19	2.38437 AU
min. Earth dist.	-2304 Aug 27 j 21:17	26°♎12'14	0.46213 AU				
greatest brilliancy	-2304 Sep 03 j 07:17	23°♎58'30	-2.3m	conjunction	-2299 Dec 04 j 00:41	24°♎38'01	0°-41'-30
opposition	-2304 Sep 05 j 00:46	23°♎22'16	-4°-43'-8	minimum elong	-2299 Dec 03 j 21:50	24°♎32'25	0°41'31
direct	-2304 Oct 07 j 17:48	16°♎41'31			-2299 Dec 10 j 20:27	0°♏	
	-2304 Nov 28 j 05:27	0°♑			-2298 Jan 17 j 23:28	0°♑	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 11

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

morning rise	-2298 Feb 10 j 03:17	18° $\overline{\text{C}}$ 01'49		min. Earth dist.	-2293 Mar 30 j 13:08	8° $\overline{\text{M}}$ 49'04	0.50667 AU
	-2298 Feb 25 j 17:25	0° \approx		direct	-2293 Apr 29 j 17:14	2° $\overline{\text{M}}$ 59'02	
	-2298 Apr 06 j 22:22	0° H		desc. node	-2293 May 24 j 00:13	6° $\overline{\text{M}}$ 41'45	
	-2298 May 19 j 08:01	0° Y			-2293 Jul 12 j 18:13	0° $\underline{\text{A}}$	
	-2298 Jul 03 j 17:56	0° B			-2293 Aug 27 j 00:49	0° $\overline{\text{M}}$	
asc. node	-2298 Aug 06 j 12:58	20° B 37'45			-2293 Oct 06 j 21:28	0° Z	
	-2298 Aug 23 j 00:14	0° $\overline{\text{II}}$			-2293 Nov 15 j 17:32	0° $\overline{\text{C}}$	
	-2298 Oct 31 j 15:30	0° $\overline{\text{C}}$			-2293 Dec 26 j 01:33	0° \approx	
retrograde	-2298 Nov 23 j 00:51	2° $\overline{\text{C}}$ 50'19			-2292 Feb 05 j 18:51	0° H	
	-2298 Dec 13 j 21:26	30° R $\overline{\text{II}}$			-2292 Mar 20 j 07:00	0° Y	
opposition	-2297 Jan 01 j 15:39	23° $\overline{\text{II}}$ 24'30	4°19'41	asc. node	-2292 Mar 28 j 08:24	5° Y 25'22	
greatest brilliancy	-2297 Jan 01 j 21:40	23° $\overline{\text{II}}$ 18'31	-1.2m	evening set	-2292 Apr 04 j 09:28	10° Y 07'56	
min. Earth dist.	-2297 Jan 03 j 08:39	22° $\overline{\text{II}}$ 43'45	0.67075 AU		-2292 May 04 j 12:47	0° B	
direct	-2297 Feb 11 j 17:30	13° $\overline{\text{II}}$ 26'46					
	-2297 Apr 13 j 05:28	0° $\overline{\text{C}}$		conjunction	-2292 May 24 j 20:59	13° B 11'52	0°31'46
	-2297 Jun 07 j 13:24	0° $\underline{\text{Q}}$		minimum elong	-2292 May 24 j 19:50	13° B 10'01	0°31'48
	-2297 Jul 23 j 20:55	0° $\overline{\text{M}}$		max. Earth dist.	-2292 Jun 04 j 03:57	19° B 49'22	2.65346 AU
desc. node	-2297 Aug 19 j 02:12	18° $\overline{\text{M}}$ 24'19			-2292 Jun 20 j 01:10	0° $\overline{\text{II}}$	
	-2297 Sep 04 j 00:15	0° $\underline{\text{A}}$		morning rise	-2292 Jul 10 j 22:55	13° $\overline{\text{II}}$ 19'25	
	-2297 Oct 13 j 15:44	0° $\overline{\text{M}}$			-2292 Aug 06 j 05:34	0° $\overline{\text{C}}$	
	-2297 Nov 21 j 00:06	0° Z			-2292 Sep 22 j 15:52	0° $\underline{\text{Q}}$	
evening set	-2297 Dec 09 j 03:33	14° Z 18'41			-2292 Nov 09 j 10:40	0° $\overline{\text{M}}$	
	-2297 Dec 29 j 02:32	0° $\overline{\text{C}}$			-2292 Dec 28 j 14:45	0° $\underline{\text{A}}$	
	-2296 Feb 05 j 21:45	0° \approx			-2291 Feb 21 j 06:20	0° $\overline{\text{M}}$	
				desc. node	-2291 Apr 10 j 00:51	16° $\overline{\text{M}}$ 53'03	
conjunction	-2296 Feb 13 j 05:25	5° \approx 32'52	-1°-3'-4	retrograde	-2291 Apr 24 j 04:54	18° $\overline{\text{M}}$ 05'43	
minimum elong	-2296 Feb 13 j 07:14	5° \approx 36'17	1°03'08	opposition	-2291 May 24 j 20:14	12° $\overline{\text{M}}$ 56'21	-3°-4'-36
	-2296 Mar 17 j 04:45	0° H		greatest brilliancy	-2291 May 25 j 10:43	12° $\overline{\text{M}}$ 46'19	-2.8m
max. Earth dist.	-2296 Apr 01 j 02:04	10° H 44'00	2.46092 AU	min. Earth dist.	-2291 May 29 j 02:44	11° $\overline{\text{M}}$ 45'28	0.38868 AU
morning rise	-2296 Apr 16 j 07:53	21° H 30'56		direct	-2291 Jun 25 j 18:20	7° $\overline{\text{M}}$ 15'55	
	-2296 Apr 28 j 12:38	0° Y			-2291 Aug 30 j 13:37	0° Z	
	-2296 Jun 12 j 04:48	0° B			-2291 Oct 17 j 08:36	0° $\overline{\text{C}}$	
asc. node	-2296 Jun 23 j 11:10	7° B 18'42			-2291 Nov 30 j 16:42	0° \approx	
	-2296 Jul 29 j 11:45	0° $\overline{\text{II}}$			-2290 Jan 14 j 00:05	0° H	
	-2296 Sep 18 j 14:09	0° $\overline{\text{C}}$		asc. node	-2290 Feb 13 j 06:00	20° H 07'32	
	-2296 Nov 21 j 03:40	0° $\underline{\text{Q}}$			-2290 Feb 28 j 06:46	0° Y	
retrograde	-2296 Dec 29 j 18:16	7° $\underline{\text{Q}}$ 32'29			-2290 Apr 15 j 16:09	0° B	
	-2295 Feb 03 j 01:29	30° R $\overline{\text{C}}$		evening set	-2290 May 16 j 05:32	19° B 29'49	
opposition	-2295 Feb 05 j 18:51	28° $\overline{\text{C}}$ 57'48	4°49'42		-2290 Jun 01 j 17:55	0° $\overline{\text{II}}$	
greatest brilliancy	-2295 Feb 06 j 23:16	28° $\overline{\text{C}}$ 30'29	-1.5m	max. Earth dist.	-2290 Jun 27 j 16:46	16° $\overline{\text{II}}$ 30'54	2.67197 AU
min. Earth dist.	-2295 Feb 11 j 07:33	26° $\overline{\text{C}}$ 50'23	0.61821 AU				
direct	-2295 Mar 18 j 20:18	19° $\overline{\text{C}}$ 02'51		conjunction	-2290 Jul 02 j 05:13	19° $\overline{\text{II}}$ 23'46	1°03'04
	-2295 May 03 j 18:31	0° $\underline{\text{Q}}$		minimum elong	-2290 Jul 02 j 04:13	19° $\overline{\text{II}}$ 22'11	1°03'07
	-2295 Jun 28 j 12:15	0° $\overline{\text{M}}$			-2290 Jul 18 j 19:15	0° $\overline{\text{C}}$	
desc. node	-2295 Jul 06 j 00:29	4° $\overline{\text{M}}$ 46'52		morning rise	-2290 Aug 16 j 04:32	18° $\overline{\text{C}}$ 17'11	
	-2295 Aug 11 j 23:29	0° $\underline{\text{A}}$			-2290 Sep 03 j 04:40	0° $\underline{\text{Q}}$	
	-2295 Sep 21 j 12:01	0° $\overline{\text{M}}$			-2290 Oct 18 j 13:53	0° $\overline{\text{M}}$	
	-2295 Oct 30 j 07:33	0° Z			-2290 Dec 01 j 23:11	0° $\underline{\text{A}}$	
	-2295 Dec 07 j 19:14	0° $\overline{\text{C}}$			-2289 Jan 14 j 14:32	0° $\overline{\text{M}}$	
	-2294 Jan 16 j 00:23	0° \approx		desc. node	-2289 Feb 26 j 00:20	29° $\overline{\text{M}}$ 14'57	
evening set	-2294 Feb 12 j 18:42	20° \approx 35'45			-2289 Feb 27 j 02:39	0° Z	
	-2294 Feb 25 j 17:53	0° H			-2289 Apr 13 j 05:22	0° $\overline{\text{C}}$	
	-2294 Apr 09 j 10:19	0° Y			-2289 Jun 08 j 19:55	0° \approx	
				retrograde	-2289 Jul 09 j 05:32	6° \approx 00'17	
conjunction	-2294 Apr 11 j 10:31	1° Y 22'37	0°-17'-37	min. Earth dist.	-2289 Aug 05 j 00:37	1° \approx 20'14	0.41470 AU
minimum elong	-2294 Apr 11 j 11:28	1° Y 24'13	0°17'37		-2289 Aug 09 j 07:39	30° R $\overline{\text{C}}$	
max. Earth dist.	-2294 May 09 j 06:36	20° Y 10'02	2.58092 AU	greatest brilliancy	-2289 Aug 10 j 07:48	29° $\overline{\text{C}}$ 40'56	-2.6m
asc. node	-2294 May 11 j 10:04	21° Y 35'38		opposition	-2289 Aug 12 j 05:19	29° $\overline{\text{C}}$ 05'07	-6°-16'-20
	-2294 May 24 j 03:29	0° B		direct	-2289 Sep 12 j 02:19	23° $\overline{\text{C}}$ 19'35	
morning rise	-2294 Jun 03 j 04:16	6° B 33'52			-2289 Oct 16 j 07:17	0° \approx	
	-2294 Jul 09 j 15:41	0° $\overline{\text{II}}$			-2289 Dec 16 j 20:28	0° H	
	-2294 Aug 26 j 18:31	0° $\overline{\text{C}}$		asc. node	-2288 Jan 01 j 05:14	8° H 51'30	
	-2294 Oct 16 j 01:42	0° $\underline{\text{Q}}$			-2288 Feb 05 j 15:10	0° Y	
	-2294 Dec 11 j 09:58	0° $\overline{\text{M}}$			-2288 Mar 25 j 16:26	0° B	
retrograde	-2293 Feb 15 j 06:10	18° $\overline{\text{M}}$ 53'04			-2288 May 13 j 01:53	0° $\overline{\text{II}}$	
opposition	-2293 Mar 22 j 04:41	11° $\overline{\text{M}}$ 44'29	3°11'48	evening set	-2288 Jun 22 j 09:20	25° $\overline{\text{II}}$ 24'20	
greatest brilliancy	-2293 Mar 23 j 15:56	11° $\overline{\text{M}}$ 13'29	-2.0m		-2288 Jun 29 j 14:01	0° $\overline{\text{C}}$	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 12

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

max. Earth dist.	-2288 Jul 21 j 01:58	13° $\overline{51}$ '16	2.63650 AU		-2283 Jan 25 j 14:08	0° $\overline{3}$	
					-2283 Mar 05 j 09:16	0° \approx	
conjunction	-2288 Aug 07 j 16:30	25° $\overline{22}$ '07	1°09'33		-2283 Apr 14 j 15:15	0° \overline{K}	
minimum elong	-2288 Aug 07 j 16:55	25° $\overline{22}$ '48	1°09'36		-2283 May 27 j 05:14	0° \overline{Y}	
	-2288 Aug 14 j 16:49	0° Ω			-2283 Jul 12 j 08:05	0° $\overline{8}$	
morning rise	-2288 Sep 22 j 17:00	26° Ω 17'24		asc. node	-2283 Aug 23 j 04:05	24° $\overline{8}$ 08'02	
	-2288 Sep 28 j 02:29	0° \overline{M}			-2283 Sep 03 j 15:36	0° \overline{II}	
	-2288 Nov 09 j 19:00	0° \overline{A}		retrograde	-2283 Nov 09 j 11:40	20° \overline{II} 02'09	
	-2288 Dec 21 j 00:20	0° \overline{M}		opposition	-2283 Dec 19 j 09:48	10° \overline{II} 22'28	3°47'06
desc. node	-2287 Jan 12 j 23:21	17° \overline{M} 03'37		greatest brilliancy	-2283 Dec 19 j 08:41	10° \overline{II} 23'36	-1.2m
	-2287 Jan 30 j 05:41	0° \overline{J}		min. Earth dist.	-2283 Dec 19 j 14:29	10° \overline{II} 17'47	0.67364 AU
	-2287 Mar 11 j 04:16	0° $\overline{3}$		direct	-2282 Jan 29 j 01:19	0° \overline{II} 32'56	
	-2287 Apr 21 j 00:37	0° \approx			-2282 Apr 26 j 02:35	0° $\overline{5}$	
	-2287 Jun 04 j 05:42	0° \overline{K}			-2282 Jun 16 j 11:09	0° Ω	
	-2287 Aug 03 j 01:10	0° \overline{Y}			-2282 Jul 31 j 19:44	0° \overline{M}	
retrograde	-2287 Aug 28 j 19:43	4° \overline{Y} 16'01		desc. node	-2282 Sep 04 j 18:59	24° \overline{M} 55'58	
	-2287 Sep 22 j 06:07	30° \overline{R} \overline{K}			-2282 Sep 11 j 16:07	0° \overline{A}	
min. Earth dist.	-2287 Sep 29 j 07:04	27° \overline{K} 30'06	0.53958 AU		-2282 Oct 21 j 05:44	0° \overline{M}	
opposition	-2287 Oct 06 j 07:58	24° \overline{K} 48'26	-1°-57'-11	evening set	-2282 Nov 11 j 22:31	16° \overline{M} 54'50	
greatest brilliancy	-2287 Oct 05 j 15:15	25° \overline{K} 04'28	-1.9m		-2282 Nov 28 j 13:38	0° \overline{J}	
direct	-2287 Nov 10 j 17:30	16° \overline{K} 54'59			-2281 Jan 05 j 15:27	0° $\overline{3}$	
asc. node	-2287 Nov 18 j 05:01	17° \overline{K} 16'20					
	-2286 Jan 01 j 17:50	0° \overline{Y}		conjunction	-2281 Jan 16 j 19:20	8° $\overline{3}$ 43'38	-1°-5'-52
	-2286 Mar 02 j 08:05	0° $\overline{8}$		minimum elong	-2281 Jan 16 j 18:28	8° $\overline{3}$ 41'57	1°05'57
	-2286 Apr 23 j 02:07	0° \overline{II}			-2281 Feb 13 j 09:13	0° \approx	
	-2286 Jun 10 j 21:28	0° $\overline{5}$		max. Earth dist.	-2281 Mar 06 j 20:17	16° \approx 10'52	2.40868 AU
	-2286 Jul 27 j 07:23	0° Ω		morning rise	-2281 Mar 25 j 01:37	29° \approx 37'13	
evening set	-2286 Jul 31 j 11:06	2° Ω 45'47			-2281 Mar 25 j 14:08	0° \overline{K}	
max. Earth dist.	-2286 Aug 18 j 11:56	14° Ω 54'44	2.55038 AU		-2281 May 06 j 20:50	0° \overline{Y}	
	-2286 Sep 09 j 08:54	0° \overline{M}			-2281 Jun 20 j 16:06	0° $\overline{8}$	
				asc. node	-2281 Jul 11 j 03:34	13° $\overline{8}$ 05'30	
conjunction	-2286 Sep 18 j 03:56	6° \overline{M} 10'28	0°44'39		-2281 Aug 07 j 15:40	0° \overline{II}	
minimum elong	-2286 Sep 18 j 05:30	6° \overline{M} 13'15	0°44'40		-2281 Sep 30 j 12:27	0° $\overline{5}$	
	-2286 Oct 21 j 06:47	0° \overline{A}		retrograde	-2281 Dec 15 j 08:52	23° $\overline{5}$ 47'39	
morning rise	-2286 Nov 08 j 18:13	13° \overline{A} 39'41		opposition	-2280 Jan 23 j 04:03	14° $\overline{5}$ 49'40	4°48'26
desc. node	-2286 Nov 30 j 22:38	0° \overline{M} 21'58		greatest brilliancy	-2280 Jan 23 j 23:35	14° $\overline{5}$ 30'35	-1.3m
	-2286 Nov 30 j 11:04	0° \overline{M}		min. Earth dist.	-2280 Jan 27 j 05:10	13° $\overline{5}$ 14'45	0.64666 AU
	-2285 Jan 08 j 12:36	0° \overline{J}		direct	-2280 Mar 04 j 10:52	4° $\overline{5}$ 48'26	
	-2285 Feb 16 j 05:37	0° $\overline{3}$			-2280 May 19 j 20:58	0° Ω	
	-2285 Mar 27 j 11:41	0° \approx			-2280 Jul 08 j 14:47	0° \overline{M}	
	-2285 May 07 j 09:51	0° \overline{K}		desc. node	-2280 Jul 22 j 18:32	9° \overline{M} 30'19	
	-2285 Jun 20 j 17:07	0° \overline{Y}			-2280 Aug 20 j 18:50	0° \overline{A}	
	-2285 Aug 12 j 13:03	0° $\overline{8}$			-2280 Sep 29 j 19:36	0° \overline{M}	
retrograde	-2285 Oct 06 j 16:54	15° $\overline{8}$ 24'53			-2280 Nov 07 j 08:34	0° \overline{J}	
asc. node	-2285 Oct 06 j 04:18	15° $\overline{8}$ 24'46			-2280 Dec 15 j 14:53	0° $\overline{3}$	
min. Earth dist.	-2285 Nov 12 j 01:32	6° $\overline{8}$ 53'50	0.63610 AU	evening set	-2279 Jan 19 j 11:41	26° $\overline{3}$ 52'35	
opposition	-2285 Nov 15 j 15:42	5° $\overline{8}$ 27'20	1°34'52		-2279 Jan 23 j 14:30	0° \approx	
greatest brilliancy	-2285 Nov 15 j 07:47	5° $\overline{8}$ 35'17	-1.4m		-2279 Mar 05 j 02:17	0° \overline{K}	
	-2285 Nov 30 j 13:36	30° \overline{R} \overline{Y}					
direct	-2285 Dec 24 j 07:18	26° \overline{Y} 18'14		conjunction	-2279 Mar 21 j 22:07	12° \overline{K} 03'45	0°-38'-16
	-2284 Jan 19 j 08:34	0° $\overline{8}$		minimum elong	-2279 Mar 22 j 00:12	12° \overline{K} 07'25	0°38'16
	-2284 Mar 29 j 05:45	0° \overline{II}			-2279 Apr 16 j 13:52	0° \overline{Y}	
	-2284 May 20 j 16:43	0° $\overline{5}$		max. Earth dist.	-2279 Apr 26 j 19:15	7° \overline{Y} 00'11	2.53873 AU
	-2284 Jul 07 j 06:41	0° Ω		morning rise	-2279 May 17 j 03:42	20° \overline{Y} 42'37	
	-2284 Aug 20 j 12:50	0° \overline{M}		asc. node	-2279 May 28 j 01:04	27° \overline{Y} 55'39	
evening set	-2284 Sep 13 j 18:00	17° \overline{M} 14'58			-2279 May 31 j 04:41	0° $\overline{8}$	
max. Earth dist.	-2284 Oct 01 j 11:24	0° \overline{A} 13'46	2.42807 AU		-2279 Jul 16 j 20:46	0° \overline{II}	
	-2284 Oct 01 j 03:57	0° \overline{A}			-2279 Sep 03 j 17:37	0° $\overline{5}$	
desc. node	-2284 Oct 17 j 20:56	12° \overline{A} 29'09			-2279 Oct 26 j 11:40	0° Ω	
					-2278 Jan 08 j 22:35	0° \overline{M}	
conjunction	-2284 Nov 08 j 16:36	29° \overline{A} 06'41	0°-14'-55	retrograde	-2278 Jan 25 j 23:10	1° \overline{M} 38'31	
minimum elong	-2284 Nov 08 j 15:33	29° \overline{A} 04'39	0°14'58		-2278 Feb 11 j 00:25	30° \overline{R} Ω	
behind sun begin	-2284 Nov 08 j 05:17	28° \overline{A} 44'56		opposition	-2278 Mar 03 j 07:38	23° Ω 50'30	4°12'19
behind sun end	-2284 Nov 09 j 01:48	29° \overline{A} 24'23		greatest brilliancy	-2278 Mar 04 j 21:20	23° Ω 15'45	-1.8m
	-2284 Nov 09 j 20:19	0° \overline{M}		min. Earth dist.	-2278 Mar 10 j 20:15	21° Ω 04'27	0.55630 AU
	-2284 Dec 18 j 08:51	0° \overline{J}		direct	-2278 Apr 12 j 06:20	14° Ω 25'16	
morning rise	-2283 Jan 11 j 14:42	19° \overline{J} 02'48			-2278 Jun 05 j 19:55	0° \overline{M}	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 13

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

desc. node	-2278 Jun 09 j 17:36	1°♎57'39		max. Earth dist.	-2273 Jul 12 j 08:47	3°♏10'36	2.65661 AU
	-2278 Jul 26 j 10:06	0°♎					
	-2278 Sep 06 j 17:39	0°♎		conjunction	-2273 Jul 24 j 22:43	11°♏17'26	1°10'21
	-2278 Oct 16 j 09:55	0°♎		minimum elong	-2273 Jul 24 j 22:30	11°♏17'06	1°10'24
	-2278 Nov 24 j 12:07	0°♎			-2273 Aug 22 j 13:57	0°♎	
	-2277 Jan 03 j 05:51	0°♎		morning rise	-2273 Sep 08 j 03:26	10°♎59'41	
	-2277 Feb 13 j 10:50	0°♎			-2273 Oct 06 j 06:54	0°♎	
evening set	-2277 Mar 17 j 21:24	22°♎42'36			-2273 Nov 18 j 11:56	0°♎	
	-2277 Mar 28 j 13:00	0°♎			-2273 Dec 30 j 10:04	0°♎	
asc. node	-2277 Apr 14 j 23:45	11°♎46'55		desc. node	-2272 Jan 30 j 16:11	22°♎48'21	
					-2272 Feb 09 j 11:21	0°♎	
conjunction	-2277 May 09 j 16:48	28°♎09'55	0°14'15		-2272 Mar 21 j 10:50	0°♎	
minimum elong	-2277 May 09 j 16:10	28°♎08'54	0°14'16		-2272 May 03 j 00:42	0°♎	
behind sun begin	-2277 May 09 j 07:10	27°♎54'07			-2272 Jun 21 j 18:01	0°♎	
behind sun end	-2277 May 10 j 01:11	28°♎23'41		retrograde	-2272 Aug 10 j 23:48	14°♎37'12	
	-2277 May 12 j 11:57	0°♎		min. Earth dist.	-2272 Sep 09 j 06:24	8°♎43'32	0.49008 AU
max. Earth dist.	-2277 May 26 j 08:37	9°♎02'27	2.63133 AU	greatest brilliancy	-2272 Sep 15 j 20:16	6°♎20'26	-2.2m
morning rise	-2277 Jun 27 j 12:04	29°♎43'36		opposition	-2272 Sep 17 j 05:26	5°♎50'11	-3°-41'-48
	-2277 Jun 27 j 22:20	0°♎			-2272 Oct 06 j 23:57	30°♎	
	-2277 Aug 14 j 08:17	0°♎		direct	-2272 Oct 20 j 23:24	28°♎41'04	
	-2277 Oct 01 j 12:57	0°♎			-2272 Nov 04 j 12:27	0°♎	
	-2277 Nov 20 j 04:55	0°♎		asc. node	-2272 Dec 04 j 19:53	9°♎05'15	
	-2276 Jan 13 j 16:28	0°♎			-2271 Jan 17 j 15:18	0°♎	
retrograde	-2276 Mar 25 j 00:10	22°♎02'22			-2271 Mar 11 j 19:21	0°♎	
opposition	-2276 Apr 26 j 07:25	16°♎09'21	0°01'28		-2271 Apr 30 j 19:54	0°♎	
desc. node	-2276 Apr 26 j 16:32	16°♎02'21			-2271 Jun 17 j 23:56	0°♎	
greatest brilliancy	-2277 Mar 02 j 02:00	11°♎44'30	-7.3m	evening set	-2271 Jul 15 j 20:45	17°♎55'19	
min. Earth dist.	-2276 May 03 j 20:56	13°♎50'38	0.42739 AU		-2271 Aug 03 j 05:35	0°♎	
direct	-2276 May 31 j 04:09	9°♎09'16		max. Earth dist.	-2271 Aug 06 j 14:36	2°♎14'38	2.58954 AU
	-2276 Aug 01 j 05:16	0°♎					
	-2276 Sep 17 j 05:30	0°♎		conjunction	-2271 Sep 01 j 04:33	19°♎30'52	0°58'30
	-2276 Oct 29 j 17:00	0°♎		minimum elong	-2271 Sep 01 j 05:53	19°♎33'08	0°58'31
	-2276 Dec 10 j 17:06	0°♎			-2271 Sep 16 j 09:12	0°♎	
	-2275 Jan 22 j 15:04	0°♎		morning rise	-2271 Oct 19 j 21:23	23°♎44'16	
asc. node	-2275 Mar 01 j 22:50	25°♎58'00			-2271 Oct 28 j 12:59	0°♎	
	-2275 Mar 08 j 00:09	0°♎			-2271 Dec 08 j 01:22	0°♎	
	-2275 Apr 22 j 19:45	0°♎		desc. node	-2271 Dec 17 j 14:53	7°♎13'17	
evening set	-2275 Apr 30 j 15:44	5°♎03'16			-2270 Jan 16 j 11:27	0°♎	
	-2275 Jun 08 j 14:24	0°♎			-2270 Feb 24 j 12:49	0°♎	
					-2270 Apr 05 j 04:09	0°♎	
conjunction	-2275 Jun 17 j 16:03	5°♎46'57	0°53'34		-2270 May 16 j 18:02	0°♎	
minimum elong	-2275 Jun 17 j 14:47	5°♎44'55	0°53'37		-2270 Jul 01 j 22:57	0°♎	
max. Earth dist.	-2275 Jun 18 j 18:33	6°♎29'10	2.67110 AU		-2270 Sep 11 j 11:47	0°♎	
	-2275 Jul 25 j 15:17	0°♎		retrograde	-2270 Sep 22 j 10:20	0°♎47'16	
morning rise	-2275 Aug 02 j 02:52	4°♎47'14			-2270 Oct 02 j 22:56	30°♎	
	-2275 Sep 10 j 07:40	0°♎		asc. node	-2270 Oct 22 j 19:47	24°♎29'58	
	-2275 Oct 26 j 09:28	0°♎		min. Earth dist.	-2270 Oct 27 j 00:36	22°♎52'43	0.60468 AU
	-2275 Dec 11 j 00:00	0°♎		opposition	-2270 Nov 01 j 01:02	20°♎52'51	0°23'05
	-2274 Jan 25 j 16:10	0°♎		greatest brilliancy	-2270 Oct 31 j 22:12	20°♎55'40	-1.6m
	-2274 Mar 13 j 23:25	0°♎		direct	-2270 Dec 08 j 13:28	12°♎08'13	
desc. node	-2274 Mar 14 j 16:47	0°♎26'21			-2269 Feb 10 j 08:45	0°♎	
	-2274 May 11 j 03:50	0°♎			-2269 Apr 09 j 00:04	0°♎	
retrograde	-2274 Jun 12 j 13:58	6°♎24'36			-2269 May 29 j 13:26	0°♎	
min. Earth dist.	-2274 Jul 10 j 00:26	1°♎55'43	0.38253 AU		-2269 Jul 15 j 13:24	0°♎	
opposition	-2274 Jul 13 j 22:52	0°♎50'36	-6°-38'-19	evening set	-2269 Aug 26 j 21:31	28°♎44'40	
greatest brilliancy	-2274 Jul 12 j 20:43	1°♎08'42	-2.8m		-2269 Aug 28 j 16:35	0°♎	
	-2274 Jul 17 j 00:32	30°♎		max. Earth dist.	-2269 Sep 10 j 21:52	9°♎20'19	2.47791 AU
direct	-2274 Aug 12 j 17:47	25°♎47'47			-2269 Oct 09 j 09:28	0°♎	
	-2274 Sep 07 j 23:01	0°♎					
	-2274 Nov 09 j 18:39	0°♎		conjunction	-2269 Oct 18 j 07:05	6°♎35'56	0°11'41
	-2274 Dec 29 j 00:59	0°♎		minimum elong	-2269 Oct 18 j 07:46	6°♎37'11	0°11'40
asc. node	-2273 Jan 17 j 21:02	12°♎27'02		behind sun begin	-2269 Oct 17 j 15:13	6°♎06'24	
	-2273 Feb 14 j 17:20	0°♎		behind sun end	-2269 Oct 19 j 00:18	7°♎08'00	
	-2273 Apr 03 j 09:58	0°♎		desc. node	-2269 Nov 04 j 14:34	19°♎36'45	
	-2273 May 21 j 03:48	0°♎			-2269 Nov 18 j 05:35	0°♎	
evening set	-2273 Jun 08 j 16:41	11°♎42'23		morning rise	-2269 Dec 15 j 19:52	21°♎20'35	
	-2273 Jul 07 j 10:02	0°♎			-2269 Dec 26 j 22:01	0°♎	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 14

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2268 Feb 03 j 06:33	0°☾		min. Earth dist.	-2263 Feb 20 j 22:03	5°♌30'56	0.59863 AU
	-2268 Mar 13 j 04:11	0°♊			-2263 Mar 10 j 13:45	30°♊☾	
	-2268 Apr 22 j 13:19	0°♋		direct	-2263 Mar 27 j 09:51	28°♊☾06'10	
	-2268 Jun 04 j 11:59	0°♌			-2263 Apr 14 j 01:01	0°♌	
	-2268 Jul 21 j 21:14	0°♍			-2263 Jun 21 j 04:38	0°♍	
asc. node	-2268 Sep 08 j 18:54	25°♌18'50		desc. node	-2263 Jun 26 j 09:55	3°♍09'18	
	-2268 Sep 20 j 19:31	0°♎			-2263 Aug 06 j 00:54	0°♎	
retrograde	-2268 Oct 27 j 03:14	7°♎08'22			-2263 Sep 16 j 01:07	0°♎	
	-2268 Nov 29 j 09:46	30°♎☾			-2263 Oct 25 j 02:16	0°♎	
min. Earth dist.	-2268 Dec 04 j 21:17	27°♎49'51	0.66660 AU		-2263 Dec 02 j 17:50	0°☾	
opposition	-2268 Dec 06 j 04:36	27°♎18'22	3°04'21		-2262 Jan 11 j 02:16	0°♊	
greatest brilliancy	-2268 Dec 05 j 22:21	27°♎24'39	-1.3m		-2262 Feb 20 j 22:35	0°♋	
direct	-2267 Jan 15 j 04:43	17°♎41'27		evening set	-2262 Feb 25 j 10:00	3°♋12'21	
	-2267 Mar 07 j 13:44	0°♌			-2262 Apr 04 j 17:24	0°♌	
	-2267 May 06 j 07:04	0°♍					
	-2267 Jun 24 j 15:16	0°♎		conjunction	-2262 Apr 22 j 04:12	11°♌50'56	0°-5'-36
	-2267 Aug 08 j 10:30	0°♏		minimum elong	-2262 Apr 22 j 04:27	11°♌51'23	0°05'37
	-2267 Sep 19 j 03:42	0°♐		behind sun begin	-2262 Apr 21 j 07:31	11°♌16'09	
desc. node	-2267 Sep 21 j 12:59	1°♐46'15		behind sun end	-2262 Apr 23 j 01:23	12°♌26'34	
evening set	-2267 Oct 17 j 16:58	21°♐31'02		asc. node	-2262 May 01 j 15:59	18°♌12'28	
	-2267 Oct 28 j 17:40	0°♑		max. Earth dist.	-2262 May 15 j 18:41	27°♌33'59	2.60109 AU
	-2267 Dec 06 j 02:29	0°♒			-2262 May 19 j 11:26	0°♒	
				morning rise	-2262 Jun 12 j 07:38	15°♒31'24	
conjunction	-2267 Dec 19 j 09:51	10°♒29'32	0°-53'-50		-2262 Jul 04 j 21:50	0°♓	
minimum elong	-2267 Dec 19 j 06:52	10°♒23'37	0°53'52		-2262 Aug 21 j 16:39	0°♓	
max. Earth dist.	-2267 Dec 25 j 01:19	14°♒56'37	2.37404 AU		-2262 Oct 10 j 00:43	0°♓	
	-2266 Jan 13 j 04:36	0°☾			-2262 Dec 01 j 23:12	0°♏	
	-2266 Feb 20 j 21:36	0°♊			-2261 Feb 22 j 04:59	0°♐	
morning rise	-2266 Feb 26 j 09:14	4°♊10'36		retrograde	-2261 Feb 28 j 01:52	0°♐12'38	
	-2266 Apr 02 j 01:09	0°♋			-2261 Mar 05 j 20:34	30°♏♍	
	-2266 May 14 j 08:03	0°♌		opposition	-2261 Apr 03 j 04:16	23°♏28'52	2°17'45
	-2266 Jun 28 j 09:47	0°♍		greatest brilliancy	-2261 Apr 04 j 07:53	23°♏05'29	-2.2m
asc. node	-2266 Jul 27 j 17:45	18°♍18'23		min. Earth dist.	-2261 Apr 11 j 15:44	20°♏37'46	0.47803 AU
	-2266 Aug 16 j 12:52	0°♎		direct	-2261 May 10 j 14:39	15°♏14'38	
	-2266 Oct 15 j 07:12	0°♏		desc. node	-2261 May 14 j 09:30	15°♏20'33	
retrograde	-2266 Dec 01 j 00:37	10°♏41'41			-2261 Jun 30 j 21:27	0°♐	
opposition	-2265 Jan 09 j 09:19	1°♏24'46	4°33'36		-2261 Aug 19 j 09:22	0°♑	
greatest brilliancy	-2265 Jan 09 j 19:55	1°♏14'16	-1.3m		-2261 Sep 30 j 11:22	0°♒	
min. Earth dist.	-2265 Jan 11 j 22:13	0°♏24'30	0.66497 AU		-2261 Nov 09 j 22:32	0°☾	
	-2265 Jan 12 j 23:04	30°♏♌			-2261 Dec 20 j 16:51	0°♊	
direct	-2265 Feb 19 j 14:16	21°♏24'18			-2260 Jan 31 j 17:35	0°♋	
	-2265 Apr 01 j 18:15	0°♍			-2260 Mar 15 j 11:23	0°♌	
	-2265 Jun 01 j 05:27	0°♎		asc. node	-2260 Mar 18 j 14:09	2°♌05'32	
	-2265 Jul 18 j 11:55	0°♏		evening set	-2260 Apr 14 j 06:19	19°♌47'43	
desc. node	-2265 Aug 09 j 10:52	15°♏12'12			-2260 Apr 29 j 20:46	0°♍	
	-2265 Aug 29 j 23:07	0°♐					
	-2265 Oct 08 j 17:49	0°♑		conjunction	-2260 Jun 02 j 17:22	21°♍51'31	0°40'41
greatest brilliancy	-2265 Nov 02 j 14:27	19°♑21'02	1.2m	minimum elong	-2260 Jun 02 j 16:05	21°♍49'28	0°40'43
	-2265 Nov 16 j 03:36	0°♒		max. Earth dist.	-2260 Jun 09 j 15:41	26°♍17'52	2.66206 AU
evening set	-2265 Dec 24 j 17:15	0°☾19'56			-2260 Jun 15 j 10:37	0°♓	
	-2265 Dec 24 j 07:03	0°☾		morning rise	-2260 Jul 19 j 02:05	21°♓26'32	
	-2264 Feb 01 j 03:11	0°♊			-2260 Aug 01 j 12:58	0°♓	
					-2260 Sep 17 j 15:32	0°♓	
conjunction	-2264 Feb 27 j 14:53	19°♊51'39	0°-56'-5		-2260 Nov 03 j 16:34	0°♏	
minimum elong	-2264 Feb 27 j 17:20	19°♊56'10	0°56'08		-2260 Dec 21 j 04:39	0°♐	
	-2264 Mar 12 j 10:47	0°♋			-2259 Feb 08 j 21:09	0°♑	
max. Earth dist.	-2264 Apr 11 j 15:24	21°♋33'20	2.48968 AU	desc. node	-2259 Mar 31 j 08:33	25°♑36'00	
	-2264 Apr 23 j 18:44	0°♌			-2259 Apr 12 j 10:02	0°♒	
morning rise	-2264 Apr 28 j 04:11	3°♌01'36		retrograde	-2259 May 12 j 06:45	5°♒10'58	
	-2264 Jun 07 j 08:42	0°♍		opposition	-2259 Jun 11 j 16:10	0°♒10'12	-4°-49'-54
asc. node	-2264 Jun 13 j 17:17	4°♍09'15		greatest brilliancy	-2259 Jun 11 j 21:51	0°♒06'24	-2.9m
	-2264 Jul 24 j 07:55	0°♎			-2259 Jun 12 j 07:27	30°♑♌	
	-2264 Sep 12 j 08:41	0°♏		min. Earth dist.	-2259 Jun 13 j 00:54	29°♑48'22	0.37795 AU
	-2264 Nov 08 j 20:15	0°♐		direct	-2259 Jul 12 j 03:38	25°♑00'39	
retrograde	-2263 Jan 08 j 03:29	16°♑14'01			-2259 Aug 09 j 11:18	0°♒	
opposition	-2263 Feb 14 j 15:11	7°♑54'07	4°42'14		-2259 Oct 07 j 19:53	0°☾	
greatest brilliancy	-2263 Feb 15 j 23:52	7°♑23'03	-1.6m		-2259 Nov 23 j 16:41	0°♊	

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2258 Jan 08 j 03:59	0°♄		desc. node	-2254 Nov 21 j 07:23	26°♄40'59	
asc. node	-2258 Feb 03 j 12:49	17°♄17'25			-2254 Nov 25 j 16:04	0°♄	
	-2258 Feb 23 j 02:12	0°♄			-2253 Jan 03 j 14:20	0°♄	
	-2258 Apr 10 j 20:23	0°♄			-2253 Feb 11 j 03:55	0°♄	
evening set	-2258 May 24 j 20:35	27°♄55'49			-2253 Mar 22 j 06:04	0°♄	
	-2258 May 28 j 02:55	0°♄			-2253 May 01 j 21:23	0°♄	
max. Earth dist.	-2258 Jul 03 j 00:46	22°♄50'01	2.66884 AU		-2253 Jun 14 j 11:46	0°♄	
					-2253 Aug 03 j 08:12	0°♄	
conjunction	-2258 Jul 10 j 11:09	27°♄35'05	1°06'52	asc. node	-2253 Sep 26 j 10:20	21°♄47'35	
minimum elong	-2258 Jul 10 j 10:24	27°♄33'53	1°06'56	retrograde	-2253 Oct 14 j 15:20	23°♄48'53	
	-2258 Jul 14 j 05:39	0°♄		min. Earth dist.	-2253 Nov 20 j 21:10	14°♄59'57	0.64948 AU
morning rise	-2258 Aug 24 j 09:02	26°♄37'15		opposition	-2253 Nov 23 j 16:07	13°♄52'34	2°11'08
	-2258 Aug 29 j 12:52	0°♄		greatest brilliancy	-2253 Nov 23 j 07:36	14°♄01'08	-1.4m
	-2258 Oct 13 j 15:50	0°♄		direct	-2252 Jan 01 j 20:26	4°♄32'26	
	-2258 Nov 26 j 13:30	0°♄			-2252 Mar 21 j 21:54	0°♄	
	-2257 Jan 08 j 11:05	0°♄			-2252 May 15 j 05:00	0°♄	
desc. node	-2257 Feb 16 j 09:16	27°♄34'18			-2252 Jul 02 j 08:17	0°♄	
	-2257 Feb 19 j 19:32	0°♄			-2252 Aug 15 j 19:13	0°♄	
	-2257 Apr 03 j 18:00	0°♄		evening set	-2252 Sep 25 j 08:03	29°♄09'42	
	-2257 May 20 j 21:56	0°♄			-2252 Sep 26 j 11:15	0°♄	
retrograde	-2257 Jul 22 j 11:30	21°♄27'34		desc. node	-2252 Oct 08 j 05:42	8°♄46'18	
min. Earth dist.	-2257 Aug 18 j 20:07	16°♄25'35	0.44002 AU	max. Earth dist.	-2252 Oct 18 j 05:08	16°♄18'04	2.40205 AU
greatest brilliancy	-2257 Aug 24 j 22:25	14°♄24'04	-2.4m		-2252 Nov 05 j 02:55	0°♄	
opposition	-2257 Aug 26 j 19:49	13°♄46'04	-5°-27'-36				
direct	-2257 Sep 27 j 16:47	7°♄29'48		conjunction	-2252 Nov 22 j 14:44	13°♄34'16	0°-30'-24
	-2257 Dec 07 j 03:43	0°♄		minimum elong	-2252 Nov 22 j 12:32	13°♄29'59	0°30'27
asc. node	-2257 Dec 22 j 11:25	8°♄02'52			-2252 Dec 13 j 13:59	0°♄	
	-2256 Jan 30 j 04:51	0°♄			-2251 Jan 20 j 17:45	0°♄	
	-2256 Mar 20 j 08:35	0°♄		morning rise	-2251 Jan 28 j 04:49	5°♄50'00	
	-2256 May 08 j 05:51	0°♄			-2251 Feb 28 j 11:33	0°♄	
	-2256 Jun 24 j 23:09	0°♄			-2251 Apr 09 j 15:37	0°♄	
evening set	-2256 Jun 30 j 20:07	3°♄45'24			-2251 May 22 j 01:16	0°♄	
max. Earth dist.	-2256 Jul 26 j 23:04	20°♄40'14	2.62210 AU		-2251 Jul 06 j 15:12	0°♄	
	-2256 Aug 10 j 03:01	0°♄		asc. node	-2251 Aug 13 j 10:29	22°♄39'25	
					-2251 Aug 26 j 18:54	0°♄	
conjunction	-2256 Aug 16 j 08:21	4°♄08'03	1°06'57	retrograde	-2251 Nov 17 j 06:33	27°♄51'06	
minimum elong	-2256 Aug 16 j 09:07	4°♄09'22	1°07'00	opposition	-2251 Dec 27 j 00:29	18°♄18'38	4°07'14
	-2256 Sep 23 j 10:54	0°♄		greatest brilliancy	-2251 Dec 27 j 03:05	18°♄16'02	-1.2m
morning rise	-2256 Oct 02 j 02:11	5°♄59'54		min. Earth dist.	-2251 Dec 28 j 00:58	17°♄54'11	0.67330 AU
	-2256 Nov 04 j 22:56	0°♄		direct	-2250 Feb 05 j 21:44	8°♄24'07	
	-2256 Dec 15 j 21:59	0°♄			-2250 Apr 18 j 07:11	0°♄	
desc. node	-2255 Jan 03 j 09:07	13°♄48'48			-2250 Jun 10 j 18:30	0°♄	
	-2255 Jan 24 j 19:30	0°♄			-2250 Jul 26 j 17:23	0°♄	
	-2255 Mar 05 j 08:38	0°♄		desc. node	-2250 Aug 26 j 04:12	21°♄30'20	
	-2255 Apr 14 j 14:47	0°♄			-2250 Sep 06 j 18:52	0°♄	
	-2255 May 27 j 10:15	0°♄			-2250 Oct 16 j 10:24	0°♄	
	-2255 Jul 17 j 07:53	0°♄			-2250 Nov 23 j 18:43	0°♄	
retrograde	-2255 Sep 07 j 04:39	14°♄45'23		evening set	-2250 Nov 27 j 02:06	2°♄36'33	
min. Earth dist.	-2255 Oct 09 j 20:00	7°♄33'02	0.56474 AU		-2250 Dec 31 j 20:29	0°♄	
opposition	-2255 Oct 16 j 04:43	5°♄03'58	-1°-1'-48				
greatest brilliancy	-2255 Oct 15 j 20:25	5°♄12'05	-1.8m	conjunction	-2249 Feb 01 j 12:10	24°♄34'48	-1°-5'-57
	-2255 Oct 30 j 16:07	30°♄		minimum elong	-2249 Feb 01 j 13:00	24°♄36'24	1°06'01
asc. node	-2255 Nov 08 j 10:10	27°♄58'03			-2249 Feb 08 j 14:16	0°♄	
direct	-2255 Nov 21 j 09:18	26°♄50'05			-2249 Mar 20 j 19:02	0°♄	
	-2255 Dec 14 j 23:26	0°♄		max. Earth dist.	-2249 Mar 23 j 05:52	1°♄47'06	2.43713 AU
	-2254 Feb 23 j 09:01	0°♄		morning rise	-2249 Apr 07 j 15:42	12°♄52'44	
	-2254 Apr 17 j 16:15	0°♄			-2249 May 02 j 00:54	0°♄	
	-2254 Jun 06 j 00:46	0°♄			-2249 Jun 15 j 16:33	0°♄	
	-2254 Jul 22 j 15:31	0°♄		asc. node	-2249 Jul 01 j 08:50	10°♄07'39	
evening set	-2254 Aug 09 j 17:53	12°♄06'43			-2249 Aug 02 j 04:05	0°♄	
max. Earth dist.	-2254 Aug 26 j 06:11	23°♄24'10	2.52599 AU		-2249 Sep 23 j 03:07	0°♄	
	-2254 Sep 04 j 18:02	0°♄			-2249 Dec 05 j 01:09	0°♄	
				retrograde	-2249 Dec 24 j 01:47	2°♄02'22	
conjunction	-2254 Sep 28 j 12:12	16°♄50'57	0°34'09		-2248 Jan 10 j 21:19	30°♄	
minimum elong	-2254 Sep 28 j 13:41	16°♄53'37	0°34'08	opposition	-2248 Jan 31 j 10:37	23°♄16'41	4°50'43
	-2254 Oct 16 j 14:24	0°♄		greatest brilliancy	-2248 Feb 01 j 11:05	22°♄52'57	-1.4m
morning rise	-2254 Nov 21 j 05:04	26°♄36'33		min. Earth dist.	-2248 Feb 05 j 07:08	21°♄23'43	0.63210 AU

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 16

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

direct	-2248 Mar 12 j 14:39	13° $\overline{\text{S}}$ 17'59		evening set	-2243 May 09 j 16:07	13° $\overline{\text{S}}$ 51'11	
	-2248 May 10 j 17:44	0° Ω			-2243 Jun 03 j 23:45	0° Π	
	-2248 Jul 02 j 09:19	0° $\overline{\text{M}}$		max. Earth dist.	-2243 Jun 24 j 01:34	12° Π 47'06	2.67270 AU
desc. node	-2248 Jul 13 j 02:36	7° $\overline{\text{M}}$ 00'00					
	-2248 Aug 15 j 07:02	0° $\underline{\text{A}}$		conjunction	-2243 Jun 26 j 01:20	14° Π 03'12	0°59'31
	-2248 Sep 24 j 15:07	0° $\overline{\text{M}}$		minimum elong	-2243 Jun 26 j 00:12	14° Π 01'22	0°59'34
	-2248 Nov 02 j 07:51	0° $\overline{\text{A}}$			-2243 Jul 21 j 00:47	0° $\overline{\text{S}}$	
	-2248 Dec 10 j 16:42	0° $\overline{\text{S}}$		morning rise	-2243 Aug 10 j 04:07	12° $\overline{\text{S}}$ 55'37	
	-2247 Jan 18 j 18:33	0° \approx			-2243 Sep 05 j 13:27	0° Ω	
evening set	-2247 Feb 02 j 12:53	11° \approx 04'20			-2243 Oct 21 j 06:03	0° $\overline{\text{M}}$	
	-2247 Feb 28 j 08:08	0° $\overline{\text{K}}$			-2243 Dec 05 j 03:25	0° $\underline{\text{A}}$	
					-2242 Jan 18 j 13:40	0° $\overline{\text{M}}$	
conjunction	-2247 Apr 02 j 20:32	23° $\overline{\text{K}}$ 45'44	0°-26'-32		-2242 Mar 04 j 08:14	0° $\overline{\text{A}}$	
minimum elong	-2247 Apr 02 j 21:59	23° $\overline{\text{K}}$ 48'15	0°26'31	desc. node	-2242 Mar 05 j 01:57	0° $\overline{\text{A}}$ 29'10	
	-2247 Apr 11 j 20:58	0° $\overline{\text{Y}}$			-2242 Apr 21 j 09:10	0° $\overline{\text{S}}$	
max. Earth dist.	-2247 May 04 j 06:05	15° $\overline{\text{Y}}$ 13'16	2.56283 AU	retrograde	-2242 Jun 28 j 03:44	23° $\overline{\text{S}}$ 53'43	
asc. node	-2247 May 18 j 07:39	24° $\overline{\text{Y}}$ 36'27		min. Earth dist.	-2242 Jul 24 j 21:34	19° $\overline{\text{S}}$ 24'53	0.39752 AU
	-2247 May 26 j 11:36	0° $\overline{\text{S}}$		greatest brilliancy	-2242 Jul 29 j 07:02	18° $\overline{\text{S}}$ 07'06	-2.7m
morning rise	-2247 May 27 j 01:18	0° $\overline{\text{S}}$ 22'32		opposition	-2242 Jul 30 j 23:00	17° $\overline{\text{S}}$ 37'24	-6°-39'-23
	-2247 Jul 12 j 00:13	0° Π		direct	-2242 Aug 30 j 05:03	12° $\overline{\text{S}}$ 14'27	
	-2247 Aug 29 j 08:56	0° $\overline{\text{S}}$			-2242 Oct 28 j 21:08	0° \approx	
	-2247 Oct 19 j 12:05	0° Ω			-2242 Dec 21 j 18:29	0° $\overline{\text{K}}$	
	-2247 Dec 18 j 16:56	0° $\overline{\text{M}}$		asc. node	-2241 Jan 08 j 02:27	10° $\overline{\text{K}}$ 27'15	
retrograde	-2246 Feb 06 j 03:09	11° $\overline{\text{M}}$ 37'51			-2241 Feb 08 j 22:40	0° $\overline{\text{Y}}$	
opposition	-2246 Mar 13 j 17:44	4° $\overline{\text{M}}$ 10'31	3°41'45		-2241 Mar 29 j 07:51	0° $\overline{\text{S}}$	
greatest brilliancy	-2246 Mar 15 j 07:07	3° $\overline{\text{M}}$ 36'51	-1.9m		-2241 May 16 j 10:06	0° Π	
min. Earth dist.	-2246 Mar 21 j 19:01	1° $\overline{\text{M}}$ 17'09	0.52943 AU	evening set	-2241 Jun 17 j 03:22	20° Π 00'03	
	-2246 Mar 25 j 13:51	30° $\overline{\text{R}}$ Ω			-2241 Jul 02 j 19:53	0° $\overline{\text{S}}$	
direct	-2246 Apr 21 j 22:55	25° $\overline{\Omega}$ 04'56		max. Earth dist.	-2241 Jul 17 j 22:24	9° $\overline{\text{S}}$ 42'45	2.64655 AU
	-2246 May 20 j 09:50	0° $\overline{\text{M}}$					
desc. node	-2246 May 31 j 01:50	3° $\overline{\text{M}}$ 54'44		conjunction	-2241 Aug 02 j 08:28	19° $\overline{\text{S}}$ 43'36	1°10'25
	-2246 Jul 18 j 14:16	0° $\underline{\text{A}}$		minimum elong	-2241 Aug 02 j 08:37	19° $\overline{\text{S}}$ 43'50	1°10'28
	-2246 Aug 31 j 08:04	0° $\overline{\text{M}}$			-2241 Aug 17 j 23:49	0° Ω	
	-2246 Oct 10 j 14:44	0° $\overline{\text{A}}$		morning rise	-2241 Sep 16 j 21:56	20° $\overline{\Omega}$ 01'00	
	-2246 Nov 19 j 01:37	0° $\overline{\text{S}}$			-2241 Oct 01 j 13:28	0° $\overline{\text{M}}$	
	-2246 Dec 29 j 02:07	0° \approx			-2241 Nov 13 j 11:57	0° $\underline{\text{A}}$	
	-2245 Feb 08 j 12:29	0° $\overline{\text{K}}$			-2241 Dec 25 j 00:53	0° $\overline{\text{M}}$	
	-2245 Mar 23 j 18:52	0° $\overline{\text{Y}}$		desc. node	-2240 Jan 21 j 01:09	19° $\overline{\text{M}}$ 55'16	
evening set	-2245 Mar 28 j 15:24	3° $\overline{\text{Y}}$ 17'16			-2240 Feb 03 j 14:33	0° $\overline{\text{A}}$	
asc. node	-2245 Apr 05 j 06:28	8° $\overline{\text{Y}}$ 25'24			-2240 Mar 14 j 22:22	0° $\overline{\text{S}}$	
	-2245 May 07 j 20:22	0° $\overline{\text{S}}$			-2240 Apr 25 j 08:21	0° \approx	
					-2240 Jun 10 j 00:30	0° $\overline{\text{K}}$	
conjunction	-2245 May 19 j 01:56	7° $\overline{\text{S}}$ 19'21	0°24'43	retrograde	-2240 Aug 21 j 10:37	26° $\overline{\text{K}}$ 34'24	
minimum elong	-2245 May 19 j 00:58	7° $\overline{\text{S}}$ 17'46	0°24'44	min. Earth dist.	-2240 Sep 20 j 22:43	20° $\overline{\text{K}}$ 10'45	0.51787 AU
max. Earth dist.	-2245 Jun 01 j 02:24	15° $\overline{\text{S}}$ 45'04	2.64462 AU	greatest brilliancy	-2240 Sep 27 j 10:39	17° $\overline{\text{K}}$ 44'25	-2.0m
	-2245 Jun 23 j 07:06	0° Π		opposition	-2240 Sep 28 j 10:23	17° $\overline{\text{K}}$ 22'02	-2°-40'-42
morning rise	-2245 Jul 05 j 20:23	8° Π 00'27		direct	-2240 Nov 02 j 02:21	9° $\overline{\text{K}}$ 47'12	
	-2245 Aug 09 j 13:14	0° $\overline{\text{S}}$		asc. node	-2240 Nov 25 j 02:23	12° $\overline{\text{K}}$ 52'41	
	-2245 Sep 26 j 06:44	0° Ω			-2239 Jan 08 j 12:56	0° $\overline{\text{Y}}$	
	-2245 Nov 13 j 18:37	0° $\overline{\text{M}}$			-2239 Mar 05 j 18:06	0° $\overline{\text{S}}$	
	-2244 Jan 03 j 16:24	0° $\underline{\text{A}}$			-2239 Apr 25 j 17:01	0° Π	
	-2244 Mar 06 j 14:23	0° $\overline{\text{M}}$			-2239 Jun 13 j 06:05	0° $\overline{\text{S}}$	
retrograde	-2244 Apr 10 j 13:51	6° $\overline{\text{M}}$ 34'19		evening set	-2239 Jul 24 j 16:48	26° $\overline{\text{S}}$ 44'27	
desc. node	-2244 Apr 17 j 02:20	6° $\overline{\text{M}}$ 18'14			-2239 Jul 29 j 15:06	0° Ω	
opposition	-2244 May 11 j 19:36	1° $\overline{\text{M}}$ 08'05	-1°-40'00	max. Earth dist.	-2239 Aug 13 j 08:33	9° $\overline{\Omega}$ 50'22	2.56885 AU
greatest brilliancy	-2244 May 12 j 08:13	0° $\overline{\text{M}}$ 58'57	-2.7m				
	-2244 May 15 j 17:29	30° $\overline{\text{R}}$ $\underline{\text{A}}$		conjunction	-2239 Sep 10 j 16:42	29° $\overline{\Omega}$ 14'36	0°51'12
min. Earth dist.	-2244 May 17 j 21:18	29° $\underline{\text{A}}$ 22'49	0.40353 AU	minimum elong	-2239 Sep 10 j 18:13	29° $\overline{\Omega}$ 17'15	0°51'13
direct	-2244 Jun 14 j 01:46	24° $\underline{\text{A}}$ 53'25			-2239 Sep 11 j 18:47	0° $\overline{\text{M}}$	
	-2244 Jul 12 j 06:24	0° $\overline{\text{M}}$			-2239 Oct 23 j 20:11	0° $\underline{\text{A}}$	
	-2244 Sep 07 j 19:03	0° $\overline{\text{A}}$		morning rise	-2239 Oct 30 j 20:23	5° $\underline{\text{A}}$ 07'50	
	-2244 Oct 22 j 12:09	0° $\overline{\text{S}}$			-2239 Dec 03 j 04:42	0° $\overline{\text{M}}$	
	-2244 Dec 04 j 14:12	0° \approx		desc. node	-2239 Dec 08 j 00:25	3° $\overline{\text{M}}$ 39'04	
	-2243 Jan 17 j 04:02	0° $\overline{\text{K}}$			-2238 Jan 11 j 10:11	0° $\overline{\text{A}}$	
asc. node	-2243 Feb 20 j 03:49	22° $\overline{\text{K}}$ 50'30			-2238 Feb 19 j 06:21	0° $\overline{\text{S}}$	
	-2243 Mar 02 j 23:26	0° $\overline{\text{Y}}$			-2238 Mar 30 j 15:24	0° \approx	
	-2243 Apr 18 j 01:34	0° $\overline{\text{S}}$			-2238 May 10 j 17:53	0° $\overline{\text{K}}$	

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2238 Jun 24 j 14:10	0°♈		direct	-2233 Feb 27 j 11:44	29°♐28'00	
	-2238 Aug 19 j 16:21	0°♉			-2233 Mar 08 j 20:57	0°♑	
retrograde	-2238 Sep 30 j 17:43	9°♊45'16			-2233 May 25 j 06:55	0°♒	
asc. node	-2238 Oct 13 j 01:52	8°♋40'48			-2233 Jul 12 j 21:52	0°♓	
min. Earth dist.	-2238 Nov 05 j 07:38	1°♌29'56	0.62318 AU	desc. node	-2233 Jul 30 j 20:14	12°♐12'31	
opposition	-2238 Nov 09 j 13:25	29°♍47'57	1°06'24		-2233 Aug 24 j 19:15	0°♑	
greatest brilliancy	-2238 Nov 09 j 06:47	29°♍54'36	-1.5m		-2233 Oct 03 j 17:59	0°♒	
	-2238 Nov 09 j 01:24	30°♎♈			-2233 Nov 11 j 05:37	0°♓	
direct	-2238 Dec 17 j 17:17	20°♏49'10			-2233 Dec 19 j 10:06	0°♑	
	-2237 Jan 29 j 20:42	0°♉		evening set	-2232 Jan 09 j 02:25	16°♐03'49	
	-2237 Apr 02 j 18:15	0°♐			-2232 Jan 27 j 07:17	0°♑	
	-2237 May 24 j 09:06	0°♑			-2232 Mar 07 j 16:02	0°♒	
	-2237 Jul 10 j 18:02	0°♒					
	-2237 Aug 24 j 00:20	0°♓		conjunction	-2232 Mar 12 j 05:06	3°♎17'34	0°-46'-27
evening set	-2237 Sep 06 j 09:21	9°♐26'36		minimum elong	-2232 Mar 12 j 07:30	3°♎21'55	0°46'28
max. Earth dist.	-2237 Sep 22 j 04:43	20°♐49'09	2.45039 AU		-2232 Apr 19 j 00:33	0°♈	
	-2237 Oct 04 j 17:22	0°♑		max. Earth dist.	-2232 Apr 20 j 20:59	1°♈16'38	2.51761 AU
desc. node	-2237 Oct 25 j 22:41	15°♑51'14		morning rise	-2232 May 09 j 06:35	13°♈49'25	
					-2232 Jun 02 j 13:35	0°♉	
conjunction	-2237 Oct 30 j 14:52	19°♑23'36	0°-3'-13	asc. node	-2232 Jun 03 j 22:45	0°♉54'29	
minimum elong	-2237 Oct 30 j 14:39	19°♑23'12	0°03'15		-2232 Jul 19 j 07:05	0°♐	
behind sun begin	-2237 Oct 29 j 14:41	18°♑37'46			-2232 Sep 06 j 12:59	0°♑	
behind sun end	-2237 Oct 31 j 14:37	20°♑08'41			-2232 Oct 30 j 18:23	0°♒	
	-2237 Nov 13 j 12:16	0°♓		retrograde	-2231 Jan 18 j 01:05	25°♒17'44	
greatest brilliancy	-2237 Dec 19 j 00:31	27°♓34'19	1.2m	opposition	-2231 Feb 23 j 22:24	17°♒14'26	4°27'35
	-2237 Dec 22 j 02:56	0°♓		greatest brilliancy	-2231 Feb 25 j 10:15	16°♒40'50	-1.7m
morning rise	-2237 Dec 31 j 03:14	7°♓04'01		min. Earth dist.	-2231 Mar 02 j 21:57	14°♒37'49	0.57637 AU
	-2236 Jan 29 j 09:24	0°♑		direct	-2231 Apr 05 j 06:48	7°♒37'16	
	-2236 Mar 08 j 04:53	0°♒			-2231 Jun 12 j 12:57	0°♓	
	-2236 Apr 17 j 10:49	0°♓		desc. node	-2231 Jun 16 j 19:30	2°♐22'10	
	-2236 May 30 j 02:06	0°♈			-2231 Jul 30 j 15:43	0°♑	
	-2236 Jul 15 j 13:17	0°♉			-2231 Sep 10 j 08:31	0°♒	
asc. node	-2236 Aug 30 j 01:01	25°♊21'14			-2231 Oct 19 j 17:41	0°♓	
	-2236 Sep 08 j 20:06	0°♐			-2231 Nov 27 j 14:12	0°♑	
retrograde	-2236 Nov 03 j 20:05	15°♐02'10			-2230 Jan 06 j 02:33	0°♒	
opposition	-2236 Dec 13 j 19:46	5°♐17'20	3°30'32		-2230 Feb 16 j 02:14	0°♓	
min. Earth dist.	-2236 Dec 13 j 08:04	5°♐29'06	0.67170 AU	evening set	-2230 Mar 09 j 08:13	15°♎02'13	
greatest brilliancy	-2236 Dec 13 j 16:01	5°♐21'06	-1.3m		-2230 Mar 30 j 23:35	0°♈	
	-2236 Dec 27 j 21:36	30°♎♉		asc. node	-2230 Apr 21 j 21:09	14°♈48'38	
direct	-2235 Jan 23 j 04:42	25°♊33'02					
	-2235 Feb 21 j 03:06	0°♐		conjunction	-2230 May 02 j 09:28	21°♈48'53	0°06'10
	-2235 Apr 29 j 20:22	0°♑		minimum elong	-2230 May 02 j 09:09	21°♈48'23	0°06'11
	-2235 Jun 19 j 08:04	0°♒		behind sun begin	-2230 May 01 j 13:09	21°♈15'13	
	-2235 Aug 03 j 12:15	0°♓		behind sun end	-2230 May 03 j 05:10	22°♈21'31	
desc. node	-2235 Sep 11 j 20:39	28°♐09'50			-2230 May 14 j 19:08	0°♉	
	-2235 Sep 14 j 08:19	0°♑		max. Earth dist.	-2230 May 22 j 00:31	4°♊43'58	2.61885 AU
	-2235 Oct 23 j 22:56	0°♒		morning rise	-2230 Jun 21 j 03:34	24°♊13'10	
evening set	-2235 Oct 31 j 15:51	5°♓58'19			-2230 Jun 30 j 04:33	0°♐	
	-2235 Dec 01 j 07:34	0°♓			-2230 Aug 16 j 17:24	0°♑	
					-2230 Oct 04 j 08:19	0°♒	
conjunction	-2234 Jan 04 j 09:39	26°♓52'22	-1°-2'-28		-2230 Nov 24 j 03:31	0°♓	
minimum elong	-2234 Jan 04 j 07:33	26°♓48'14	1°02'31		-2229 Jan 22 j 03:26	0°♑	
	-2234 Jan 08 j 09:14	0°♑		retrograde	-2229 Mar 14 j 03:27	12°♑31'33	
max. Earth dist.	-2234 Feb 14 j 08:57	28°♑41'38	2.38809 AU	opposition	-2229 Apr 16 j 07:05	6°♑15'28	1°07'00
	-2234 Feb 16 j 01:59	0°♒		greatest brilliancy	-2229 Apr 16 j 21:24	6°♑03'57	-2.4m
morning rise	-2234 Mar 13 j 20:50	19°♒25'53		min. Earth dist.	-2229 Apr 24 j 12:37	3°♑37'31	0.44935 AU
	-2234 Mar 28 j 05:10	0°♓		desc. node	-2229 May 04 j 18:08	0°♑47'34	
	-2234 May 09 j 10:17	0°♈			-2229 May 08 j 12:14	30°♎♐	
	-2234 Jun 23 j 06:16	0°♉		direct	-2229 May 22 j 10:10	28°♐39'55	
asc. node	-2234 Jul 18 j 00:43	15°♊42'48			-2229 Jun 05 j 13:06	0°♑	
	-2234 Aug 10 j 13:47	0°♐			-2229 Aug 10 j 03:54	0°♒	
	-2234 Oct 05 j 02:52	0°♑			-2229 Sep 23 j 08:45	0°♓	
retrograde	-2234 Dec 09 j 04:18	18°♑36'34			-2229 Nov 03 j 18:36	0°♑	
opposition	-2233 Jan 17 j 05:32	9°♑29'35	4°43'27		-2229 Dec 15 j 02:53	0°♒	
greatest brilliancy	-2233 Jan 17 j 21:01	9°♑14'22	-1.3m		-2228 Jan 26 j 13:29	0°♓	
min. Earth dist.	-2233 Jan 20 j 14:12	8°♑10'13	0.65612 AU	asc. node	-2228 Mar 08 j 20:24	28°♎50'19	
	-2233 Feb 18 j 10:29	30°♎♐			-2228 Mar 10 j 14:03	0°♈	

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

evening set	-2228 Apr 23 j 18:36	29°Υ05'55			-2223 Feb 27 j 18:29	0°Θ		
	-2228 Apr 25 j 03:55	0°Ϡ			-2223 Apr 08 j 14:50	0°≈		
	-2228 Jun 10 j 19:44	0°Π			-2223 May 20 j 13:42	0°Ϡ		
					-2223 Jul 07 j 01:17	0°Υ		
conjunction	-2228 Jun 11 j 08:59	0°Π21'10	0°48'35	retrograde	-2223 Sep 16 j 01:24	24°Υ32'18		
minimum elong	-2228 Jun 11 j 07:41	0°Π19'05	0°48'36	min. Earth dist.	-2223 Oct 19 j 19:03	16°Υ55'58	0.58774 AU	
max. Earth dist.	-2228 Jun 15 j 02:20	2°Π43'45	2.66810 AU	opposition	-2223 Oct 25 j 10:27	14°Υ42'04	0°-11'-1	
morning rise	-2228 Jul 27 j 03:52	29°Π32'48		greatest brilliancy	-2223 Nov 11 j 08:39	8°Υ51'34	-1.8m	
	-2228 Jul 27 j 20:56	0°Ϡ		asc. node	-2223 Oct 29 j 17:19	13°Υ01'58		
	-2228 Sep 12 j 17:48	0°Ω		direct	-2223 Dec 01 j 08:54	6°Υ10'28		
	-2228 Oct 29 j 05:13	0°Ϡ			-2222 Feb 15 j 12:49	0°Ϡ		
	-2228 Dec 14 j 13:24	0°Δ			-2222 Apr 12 j 01:16	0°Π		
	-2227 Jan 30 j 14:50	0°Ϡ			-2222 Jun 01 j 02:15	0°Ϡ		
desc. node	-2227 Mar 21 j 18:12	29°Ϡ41'59			-2222 Jul 17 j 23:19	0°Ω		
	-2227 Mar 22 j 07:33	0°Ϡ		evening set	-2222 Aug 19 j 08:14	21°Ω49'00		
retrograde	-2227 May 30 j 08:45	23°Ϡ05'26			-2222 Aug 31 j 03:23	0°Ϡ		
min. Earth dist.	-2227 Jun 28 j 06:45	18°Ϡ21'34	0.37646 AU	max. Earth dist.	-2222 Sep 03 j 18:42	2°Ϡ32'54	2.49987 AU	
opposition	-2227 Jun 29 j 22:46	17°Ϡ54'56	-6°-7'-48					
greatest brilliancy	-2227 Jun 29 j 11:30	18°Ϡ02'26	-2.9m	conjunction	-2222 Oct 09 j 10:55	28°Ϡ10'01	0°21'54	
direct	-2227 Jul 29 j 16:58	12°Ϡ57'33		minimum elong	-2222 Oct 09 j 12:03	28°Ϡ12'05	0°21'53	
	-2227 Sep 24 j 15:45	0°Θ			-2222 Oct 11 j 22:48	0°Δ		
	-2227 Nov 15 j 16:41	0°≈		desc. node	-2222 Nov 11 j 16:08	22°Δ57'49		
	-2226 Jan 01 j 22:09	0°Ϡ			-2222 Nov 20 j 21:55	0°Ϡ		
asc. node	-2226 Jan 24 j 18:41	14°Ϡ40'46		morning rise	-2222 Dec 04 j 16:50	10°Ϡ35'13		
	-2226 Feb 17 j 16:51	0°Υ			-2222 Dec 29 j 17:10	0°Ϡ		
	-2226 Apr 05 j 22:16	0°Ϡ			-2221 Feb 06 j 03:35	0°Θ		
	-2226 May 23 j 10:38	0°Π			-2221 Mar 17 j 02:19	0°≈		
evening set	-2226 Jun 02 j 09:42	6°Π18'00			-2221 Apr 26 j 12:42	0°Ϡ		
max. Earth dist.	-2226 Jul 08 j 10:27	29°Π13'43	2.66309 AU		-2221 Jun 08 j 15:09	0°Υ		
	-2226 Jul 09 j 15:21	0°Ϡ			-2221 Jul 26 j 17:30	0°Ϡ		
				asc. node	-2221 Sep 16 j 16:42	24°Ϡ57'47		
conjunction	-2226 Jul 18 j 18:21	5°Ϡ51'33	1°09'23		-2221 Oct 04 j 08:35	0°Π		
minimum elong	-2226 Jul 18 j 17:54	5°Ϡ50'48	1°09'26	retrograde	-2221 Oct 22 j 10:40	1°Π58'10		
	-2226 Aug 24 j 21:17	0°Ω			-2221 Nov 08 j 10:02	30°Ϡ		
morning rise	-2226 Sep 01 j 18:18	5°Ω11'39		min. Earth dist.	-2221 Nov 29 j 12:25	22°Ϡ52'42	0.66020 AU	
	-2226 Oct 08 j 19:11	0°Ϡ		opposition	-2221 Dec 01 j 12:05	22°Ϡ04'42	2°43'28	
	-2226 Nov 21 j 07:56	0°Δ		greatest brilliancy	-2221 Dec 01 j 04:19	22°Ϡ12'31	-1.3m	
	-2225 Jan 02 j 16:07	0°Ϡ		direct	-2220 Jan 10 j 03:46	12°Ϡ34'54		
desc. node	-2225 Feb 06 j 18:15	25°Ϡ18'12			-2220 Mar 13 j 09:34	0°Π		
	-2225 Feb 13 j 05:51	0°Ϡ			-2220 May 09 j 11:13	0°Ϡ		
	-2225 Mar 26 j 21:38	0°Θ			-2220 Jun 27 j 07:50	0°Ω		
	-2225 May 09 j 19:13	0°≈			-2220 Aug 11 j 00:50	0°Ϡ		
	-2225 Jul 05 j 15:01	0°Ϡ			-2220 Sep 21 j 18:45	0°Δ		
retrograde	-2225 Aug 03 j 13:07	5°Ϡ28'16		desc. node	-2220 Sep 28 j 15:01	5°Δ05'10		
	-2225 Aug 31 j 18:41	30°Ϡ≈		evening set	-2220 Oct 07 j 15:01	11°Δ50'09		
min. Earth dist.	-2225 Aug 31 j 20:44	29°≈58'15	0.46729 AU		-2220 Oct 31 j 10:12	0°Ϡ		
greatest brilliancy	-2225 Sep 07 j 08:07	27°≈42'13	-2.3m	max. Earth dist.	-2220 Nov 14 j 02:34	10°Ϡ36'32	2.38114 AU	
opposition	-2225 Sep 08 j 23:36	27°≈07'21	-4°-28'-38					
direct	-2225 Oct 11 j 22:11	20°≈20'55		conjunction	-2220 Dec 07 j 09:29	28°Ϡ51'26	0°-44'-38	
	-2225 Nov 23 j 14:41	0°Ϡ		minimum elong	-2220 Dec 07 j 06:31	28°Ϡ45'37	0°44'40	
asc. node	-2225 Dec 12 j 17:21	8°Ϡ20'07			-2220 Dec 08 j 20:20	0°Ϡ		
	-2224 Jan 23 j 03:17	0°Υ			-2219 Jan 15 j 22:48	0°Θ		
	-2224 Mar 14 j 19:35	0°Ϡ		morning rise	-2219 Feb 13 j 19:49	22°Θ28'17		
	-2224 May 03 j 07:34	0°Π			-2219 Feb 23 j 15:15	0°≈		
	-2224 Jun 20 j 07:10	0°Ϡ			-2219 Apr 04 j 17:45	0°Ϡ		
evening set	-2224 Jul 09 j 09:30	12°Ϡ14'32			-2219 May 16 j 23:54	0°Υ		
max. Earth dist.	-2224 Aug 02 j 00:44	27°Ϡ40'48	2.60501 AU		-2219 Jul 01 j 04:17	0°Ϡ		
	-2224 Aug 05 j 12:53	0°Ω		asc. node	-2219 Aug 03 j 15:10	20°Ϡ36'20		
					-2219 Aug 19 j 21:42	0°Π		
conjunction	-2224 Aug 25 j 07:06	13°Ω13'23	1°02'41		-2219 Oct 23 j 13:15	0°Ϡ		
minimum elong	-2224 Aug 25 j 08:13	13°Ω15'16	1°02'43	retrograde	-2219 Nov 25 j 03:25	5°Ϡ39'41		
	-2224 Sep 18 j 19:17	0°Ϡ			-2219 Dec 24 j 21:26	30°Ϡ		
morning rise	-2224 Oct 12 j 00:26	16°Ϡ17'21		opposition	-2218 Jan 03 j 16:20	26°Π15'18	4°23'45	
	-2224 Oct 31 j 03:33	0°Δ		greatest brilliancy	-2218 Jan 03 j 23:12	26°Π08'28	-1.2m	
	-2224 Dec 10 j 21:07	0°Ϡ		min. Earth dist.	-2218 Jan 05 j 12:34	25°Π31'19	0.67002 AU	
desc. node	-2224 Dec 24 j 16:50	10°Ϡ23'22		direct	-2218 Feb 13 j 18:12	16°Π16'58		
	-2223 Jan 19 j 12:28	0°Ϡ			-2218 Apr 08 j 21:07	0°Ϡ		

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 19

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2218 Jun 04 j 18:11	0°♈				-2213 May 03 j 04:07	0°♉	
	-2218 Jul 21 j 11:36	0°♊						
desc. node	-2218 Aug 16 j 13:01	18°♊11'31		conjunction	-2213 May 28 j 03:35	16°♊11'52	0°34'20	
	-2218 Sep 01 j 19:43	0°♋		minimum elong	-2213 May 28 j 02:24	16°♊09'58	0°34'22	
	-2218 Oct 11 j 13:45	0°♌		max. Earth dist.	-2213 Jun 06 j 16:42	22°♊20'17	2.65530 AU	
	-2218 Nov 18 j 23:14	0°♍			-2213 Jun 18 j 15:43	0°♎		
evening set	-2218 Dec 12 j 14:51	18°♍38'45		morning rise	-2213 Jul 14 j 01:42	16°♎12'06		
	-2218 Dec 27 j 01:37	0°♏			-2213 Aug 04 j 19:14	0°♐		
greatest brilliancy	-2217 Jan 01 j 23:36	4°♏37'48	1.2m		-2213 Sep 21 j 03:44	0°♑		
	-2217 Feb 03 j 19:51	0°♐			-2213 Nov 07 j 18:06	0°♒		
					-2213 Dec 26 j 11:00	0°♓		
conjunction	-2217 Feb 16 j 13:48	9°♐39'04	-1°-1'-38		-2212 Feb 17 j 10:37	0°♈		
minimum elong	-2217 Feb 16 j 15:51	9°♐42'55	1°01'41	desc. node	-2212 Apr 07 j 10:11	20°♈03'52		
	-2217 Mar 16 j 01:02	0°♉		retrograde	-2212 Apr 28 j 02:47	22°♈36'46		
max. Earth dist.	-2217 Apr 04 j 19:23	14°♉14'18	2.46629 AU	opposition	-2212 May 28 j 18:06	17°♈29'47	-3°-30'-20	
morning rise	-2217 Apr 20 j 05:33	25°♉06'33		greatest brilliancy	-2212 May 29 j 07:52	17°♈20'18	-2.8m	
	-2217 Apr 27 j 06:25	0°♊		min. Earth dist.	-2212 Jun 01 j 10:49	16°♈28'54	0.38617 AU	
	-2217 Jun 10 j 19:24	0°♋		direct	-2212 Jun 29 j 07:54	11°♈56'08		
asc. node	-2217 Jun 21 j 14:49	7°♋02'30			-2212 Aug 25 j 20:01	0°♌		
	-2217 Jul 27 j 21:33	0°♌			-2212 Oct 14 j 06:07	0°♍		
	-2217 Sep 16 j 13:03	0°♍			-2212 Nov 28 j 00:50	0°♎		
	-2217 Nov 16 j 10:44	0°♏			-2211 Jan 11 j 12:14	0°♏		
retrograde	-2216 Jan 02 j 02:06	10°♏29'31		asc. node	-2211 Feb 10 j 10:21	19°♏52'48		
opposition	-2216 Feb 08 j 23:41	1°♏57'19	4°47'36		-2211 Feb 25 j 20:21	0°♐		
greatest brilliancy	-2216 Feb 10 j 04:50	1°♏29'19	-1.5m		-2211 Apr 13 j 06:15	0°♑		
	-2216 Feb 14 j 01:49	30°♏		evening set	-2211 May 18 j 10:20	22°♏25'23		
min. Earth dist.	-2216 Feb 14 j 15:00	29°♏47'27	0.61482 AU		-2211 May 30 j 08:28	0°♒		
direct	-2216 Mar 20 j 23:09	22°♏03'22		max. Earth dist.	-2211 Jun 29 j 08:34	19°♒05'14	2.67160 AU	
	-2216 Apr 28 j 06:51	0°♑						
	-2216 Jun 25 j 15:02	0°♒		conjunction	-2211 Jul 04 j 08:02	22°♒15'44	1°04'15	
desc. node	-2216 Jul 03 j 11:41	4°♒55'47		minimum elong	-2211 Jul 04 j 07:06	22°♒14'14	1°04'17	
	-2216 Aug 09 j 13:58	0°♓			-2211 Jul 16 j 10:29	0°♐		
	-2216 Sep 19 j 07:09	0°♈		morning rise	-2211 Aug 18 j 06:40	21°♐09'49		
	-2216 Oct 28 j 04:35	0°♉			-2211 Aug 31 j 20:28	0°♑		
	-2216 Dec 05 j 16:35	0°♊			-2211 Oct 16 j 05:33	0°♒		
	-2215 Jan 13 j 21:03	0°♋			-2211 Nov 29 j 13:23	0°♓		
evening set	-2215 Feb 15 j 19:35	24°♋23'59			-2210 Jan 12 j 01:22	0°♈		
	-2215 Feb 23 j 13:10	0°♌		desc. node	-2210 Feb 23 j 10:35	29°♈25'08		
	-2215 Apr 07 j 03:50	0°♍			-2210 Feb 24 j 06:46	0°♉		
					-2210 Apr 09 j 17:19	0°♊		
conjunction	-2215 Apr 14 j 02:27	4°♍45'16	0°-14'-25		-2210 Jun 01 j 05:53	0°♋		
minimum elong	-2215 Apr 14 j 03:13	4°♍46'34	0°14'25	retrograde	-2210 Jul 12 j 11:29	10°♋26'14		
behind sun begin	-2215 Apr 13 j 17:51	4°♍30'35		min. Earth dist.	-2210 Aug 08 j 06:29	5°♋43'22	0.41940 AU	
behind sun end	-2215 Apr 14 j 12:35	5°♍02'33		greatest brilliancy	-2210 Aug 13 j 19:39	3°♋58'20	-2.6m	
asc. node	-2215 May 08 j 13:56	21°♍15'12		opposition	-2210 Aug 15 j 17:37	3°♋21'49	-6°-6'-30	
max. Earth dist.	-2215 May 11 j 02:40	22°♍56'11	2.58488 AU		-2210 Aug 27 j 08:52	30°♌		
	-2215 May 21 j 19:04	0°♎		direct	-2210 Sep 15 j 19:04	27°♌30'24		
morning rise	-2215 Jun 05 j 12:17	9°♎37'45			-2210 Oct 05 j 23:35	0°♏		
	-2215 Jul 07 j 05:03	0°♎			-2210 Dec 13 j 08:10	0°♏		
	-2215 Aug 24 j 04:25	0°♐		asc. node	-2210 Dec 29 j 09:01	9°♏04'09		
	-2215 Oct 13 j 03:39	0°♑			-2209 Feb 02 j 19:31	0°♐		
	-2215 Dec 07 j 06:14	0°♒			-2209 Mar 24 j 02:31	0°♑		
retrograde	-2214 Feb 18 j 02:43	22°♒17'35			-2209 May 11 j 14:52	0°♒		
opposition	-2214 Mar 24 j 22:35	15°♒13'09	2°58'52	evening set	-2209 Jun 25 j 13:08	28°♒17'52		
greatest brilliancy	-2214 Mar 26 j 08:03	14°♒43'55	-2.1m		-2209 Jun 28 j 05:08	0°♓		
min. Earth dist.	-2214 Apr 02 j 08:45	12°♒17'45	0.50145 AU	max. Earth dist.	-2209 Jul 23 j 15:42	16°♓23'25	2.63408 AU	
direct	-2214 May 02 j 06:35	6°♒33'11						
desc. node	-2214 May 21 j 11:14	8°♒55'14		conjunction	-2209 Aug 10 j 20:34	28°♓18'46	1°08'58	
	-2214 Jul 09 j 02:50	0°♓		minimum elong	-2209 Aug 10 j 21:04	28°♓19'36	1°09'01	
	-2214 Aug 24 j 08:39	0°♈			-2209 Aug 13 j 09:52	0°♑		
	-2214 Oct 04 j 12:18	0°♉		morning rise	-2209 Sep 25 j 23:27	29°♑22'45		
	-2214 Nov 13 j 10:53	0°♊			-2209 Sep 26 j 21:06	0°♒		
	-2214 Dec 23 j 19:27	0°♋			-2209 Nov 08 j 14:34	0°♓		
	-2213 Feb 03 j 12:13	0°♌			-2209 Dec 19 j 20:00	0°♈		
	-2213 Mar 18 j 23:20	0°♍		desc. node	-2208 Jan 11 j 10:58	16°♈49'16		
asc. node	-2213 Mar 26 j 12:00	5°♍04'17			-2208 Jan 29 j 00:27	0°♉		
evening set	-2213 Apr 07 j 20:54	13°♍20'09			-2208 Mar 08 j 20:37	0°♊		

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 20

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2208 Apr 18 j 11:45	0°≈				-2203 Jul 29 j 12:22	0°ྐ		
	-2208 Jun 01 j 03:10	0°✠		desc. node		-2203 Sep 02 j 06:00	24°ྐ39'14		
	-2208 Jul 26 j 16:45	0°ྐ				-2203 Sep 09 j 12:49	0°♎		
retrograde	-2208 Aug 31 j 05:53	7°ྐ41'26				-2203 Oct 19 j 04:38	0°♍		
min. Earth dist.	-2208 Oct 01 j 22:57	0°ྐ49'58	0.54451 AU	evening set		-2203 Nov 15 j 07:04	21°♍08'07		
	-2208 Oct 04 j 03:19	30°✠				-2203 Nov 26 j 13:18	0°✠		
opposition	-2208 Oct 08 j 20:41	28°✠10'21	-1°-42'-3			-2202 Jan 03 j 14:43	0°♎		
greatest brilliancy	-2208 Oct 08 j 06:08	28°✠24'24	-1.9m						
direct	-2208 Nov 13 j 08:56	20°✠12'52		conjunction		-2202 Jan 20 j 08:52	13°♎05'41	-1°-6'-17	
asc. node	-2208 Nov 15 j 07:42	20°✠14'21		minimum elong		-2202 Jan 20 j 08:23	13°♎04'46	1°06'21	
	-2208 Dec 27 j 08:25	0°ྐ				-2202 Feb 11 j 07:08	0°≈		
	-2207 Feb 27 j 05:11	0°♎		max. Earth dist.		-2202 Mar 10 j 20:22	20°≈44'50	2.41378 AU	
	-2207 Apr 20 j 10:08	0°♍				-2202 Mar 23 j 10:00	0°✠		
	-2207 Jun 08 j 10:36	0°♎		morning rise		-2202 Mar 28 j 07:41	3°✠34'17		
	-2207 Jul 24 j 23:57	0°♍				-2202 May 04 j 13:59	0°ྐ		
evening set	-2207 Aug 02 j 17:56	5°♍49'07				-2202 Jun 18 j 05:35	0°♎		
max. Earth dist.	-2207 Aug 20 j 14:04	17°♍52'02	2.54602 AU	asc. node		-2202 Jul 08 j 06:15	12°♎52'02		
	-2207 Sep 07 j 04:04	0°ྐ				-2202 Aug 04 j 22:37	0°♍		
						-2202 Sep 26 j 23:50	0°♎		
conjunction	-2207 Sep 20 j 14:50	9°ྐ27'01	0°42'04	retrograde		-2202 Dec 17 j 15:03	26°♎41'33		
minimum elong	-2207 Sep 20 j 16:24	9°ྐ29'47	0°42'05	opposition		-2201 Jan 25 j 07:18	17°♎45'48	4°49'04	
	-2207 Oct 19 j 03:49	0°♎		greatest brilliancy		-2201 Jan 26 j 03:43	17°♎25'52	-1.3m	
morning rise	-2207 Nov 11 j 13:52	17°♎19'55		min. Earth dist.		-2201 Jan 29 j 11:25	16°♎08'00	0.64403 AU	
desc. node	-2207 Nov 28 j 09:12	0°♍00'02		direct		-2201 Mar 07 j 12:44	7°♎45'07		
	-2207 Nov 28 j 09:11	0°♍				-2201 May 17 j 06:51	0°♍		
	-2206 Jan 06 j 10:59	0°✠				-2201 Jul 06 j 23:39	0°ྐ		
	-2206 Feb 14 j 03:16	0°♎		desc. node		-2201 Jul 21 j 04:35	9°ྐ26'53		
	-2206 Mar 25 j 07:23	0°≈				-2201 Aug 19 j 11:32	0°♎		
	-2206 May 05 j 01:34	0°✠				-2201 Sep 28 j 16:05	0°♍		
	-2206 Jun 18 j 00:05	0°ྐ				-2201 Nov 06 j 06:46	0°✠		
	-2206 Aug 08 j 11:43	0°♎				-2201 Dec 14 j 13:21	0°♎		
asc. node	-2206 Oct 03 j 07:28	18°♎10'46				-2200 Jan 22 j 12:07	0°≈		
retrograde	-2206 Oct 08 j 19:16	18°♎22'43		evening set		-2200 Jan 23 j 18:11	0°≈56'57		
min. Earth dist.	-2206 Nov 14 j 07:27	9°♎48'30	0.63886 AU			-2200 Mar 02 j 22:16	0°✠		
opposition	-2206 Nov 17 j 18:33	8°♎24'58	1°45'40						
greatest brilliancy	-2206 Nov 17 j 10:05	8°♎33'29	-1.4m	conjunction		-2200 Mar 24 j 19:21	15°✠40'11	0°-35'-18	
	-2206 Dec 15 j 15:49	30°✠ྐ		minimum elong		-2200 Mar 24 j 21:18	15°✠43'37	0°35'19	
direct	-2206 Dec 26 j 12:31	29°ྐ13'52				-2200 Apr 14 j 07:42	0°ྐ		
	-2205 Jan 06 j 22:52	0°♎		max. Earth dist.		-2200 Apr 28 j 23:16	10°ྐ01'46	2.54335 AU	
	-2205 Mar 26 j 22:47	0°♍		morning rise		-2200 May 19 j 15:15	23°ྐ54'44		
	-2205 May 19 j 00:58	0°♎		asc. node		-2200 May 25 j 05:08	27°ྐ36'31		
	-2205 Jul 05 j 21:31	0°♍				-2200 May 28 j 20:09	0°♎		
	-2205 Aug 19 j 07:40	0°ྐ				-2200 Jul 14 j 09:20	0°♍		
evening set	-2205 Sep 17 j 10:23	20°ྐ45'01				-2200 Sep 01 j 01:04	0°♎		
	-2205 Sep 30 j 01:21	0°♎				-2200 Oct 23 j 04:43	0°♍		
max. Earth dist.	-2205 Oct 05 j 15:32	4°♎08'41	2.42293 AU			-2200 Dec 29 j 09:45	0°ྐ		
desc. node	-2205 Oct 16 j 07:15	12°♎06'57		retrograde		-2199 Jan 28 j 14:20	4°ྐ49'51		
	-2205 Nov 08 j 19:07	0°♍				-2199 Feb 25 j 11:58	30°✠♍		
				opposition		-2199 Mar 05 j 19:33	27°♍05'25	4°04'35	
conjunction	-2205 Nov 12 j 19:12	3°♍05'02	0°-18'-43	greatest brilliancy		-2199 Mar 07 j 08:56	26°♍31'04	-1.8m	
minimum elong	-2205 Nov 12 j 17:52	3°♍02'28	0°18'44	min. Earth dist.		-2199 Mar 13 j 10:37	24°♍17'52	0.55121 AU	
	-2205 Dec 17 j 08:08	0°✠		direct		-2199 Apr 14 j 14:20	17°♍43'44		
morning rise	-2204 Jan 16 j 07:29	23°✠33'03				-2199 Jun 01 j 02:33	0°ྐ		
	-2204 Jan 24 j 12:58	0°♎		desc. node		-2199 Jun 07 j 03:14	2°ྐ50'47		
	-2204 Mar 03 j 06:44	0°≈				-2199 Jul 23 j 13:17	0°♎		
	-2204 Apr 12 j 10:23	0°✠				-2199 Sep 04 j 06:56	0°♍		
	-2204 May 24 j 20:27	0°ྐ				-2199 Oct 14 j 03:11	0°✠		
	-2204 Jul 09 j 15:51	0°♎				-2199 Nov 22 j 06:53	0°♎		
asc. node	-2204 Aug 20 j 07:27	24°♎23'11				-2198 Jan 01 j 00:45	0°≈		
	-2204 Aug 30 j 23:39	0°♍				-2198 Feb 11 j 05:02	0°✠		
retrograde	-2204 Nov 11 j 13:38	22°♍51'53		evening set		-2198 Mar 20 j 13:22	26°✠06'27		
opposition	-2204 Dec 21 j 10:15	13°♍13'22	3°53'10			-2198 Mar 26 j 06:00	0°ྐ		
greatest brilliancy	-2204 Dec 21 j 09:43	13°♍13'53	-1.2m	asc. node		-2198 Apr 12 j 04:04	11°ྐ26'30		
min. Earth dist.	-2204 Dec 21 j 18:03	13°♍05'32	0.67383 AU			-2198 May 10 j 03:38	0°♎		
direct	-2203 Jan 31 j 02:22	3°♍23'03							
	-2203 Apr 22 j 17:23	0°♎		conjunction		-2198 May 12 j 02:02	1°♎16'02	0°17'11	
	-2203 Jun 13 j 20:25	0°♍		minimum elong		-2198 May 12 j 01:18	1°♎14'50	0°17'12	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 21

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

max. Earth dist.	-2198 May 27 j 22:19	11°♄35'41	2.63414 AU	direct	-2193 Oct 24 j 20:56	2°♄10'15	
	-2198 Jun 25 j 12:46	0°♄		asc. node	-2193 Dec 02 j 23:48	10°♄20'40	
morning rise	-2198 Jun 29 j 15:49	2°♄38'06			-2192 Jan 15 j 01:35	0°♄	
	-2198 Aug 11 j 21:11	0°♄			-2192 Mar 08 j 23:20	0°♄	
	-2198 Sep 28 j 22:48	0°♄			-2192 Apr 28 j 06:04	0°♄	
	-2198 Nov 17 j 06:45	0°♄			-2192 Jun 15 j 13:45	0°♄	
	-2197 Jan 09 j 14:15	0°♄		evening set	-2192 Jul 18 j 02:02	20°♄53'55	
retrograde	-2197 Mar 29 j 15:20	25°♄58'55			-2192 Jul 31 j 22:20	0°♄	
desc. node	-2197 Apr 25 j 03:41	21°♄49'10		max. Earth dist.	-2192 Aug 08 j 10:40	4°♄59'38	2.58604 AU
opposition	-2197 Apr 30 j 16:12	20°♄11'27	0°-21'-27				
greatest brilliancy	-2197 Apr 30 j 19:56	20°♄08'37	-2.6m	conjunction	-2192 Sep 03 j 12:13	22°♄37'55	0°56'42
min. Earth dist.	-2197 May 08 j 00:40	17°♄57'48	0.42233 AU	minimum elong	-2192 Sep 03 j 13:35	22°♄40'17	0°56'44
direct	-2197 Jun 04 j 07:21	13°♄19'45			-2192 Sep 14 j 04:18	0°♄	
	-2197 Jul 28 j 14:09	0°♄		morning rise	-2192 Oct 22 j 10:40	27°♄07'47	
	-2197 Sep 15 j 04:24	0°♄			-2192 Oct 26 j 09:44	0°♄	
	-2197 Oct 28 j 01:45	0°♄			-2192 Dec 05 j 22:51	0°♄	
	-2197 Dec 09 j 05:39	0°♄		desc. node	-2192 Dec 15 j 02:11	6°♄53'55	
	-2196 Jan 21 j 05:04	0°♄			-2191 Jan 14 j 08:45	0°♄	
asc. node	-2196 Feb 28 j 01:31	25°♄38'33			-2191 Feb 22 j 08:54	0°♄	
	-2196 Mar 05 j 14:30	0°♄			-2191 Apr 02 j 21:33	0°♄	
	-2196 Apr 20 j 10:06	0°♄			-2191 May 14 j 05:56	0°♄	
evening set	-2196 May 02 j 23:44	8°♄06'14			-2191 Jun 28 j 20:12	0°♄	
	-2196 Jun 06 j 04:46	0°♄		retrograde	-2191 Aug 30 j 12:28	0°♄	
					-2191 Sep 24 j 13:56	3°♄51'14	
conjunction	-2196 Jun 19 j 20:18	8°♄41'55	0°55'21		-2191 Oct 18 j 00:33	30°♄	
minimum elong	-2196 Jun 19 j 19:04	8°♄39'58	0°55'23	asc. node	-2191 Oct 19 j 23:32	29°♄21'41	
max. Earth dist.	-2196 Jun 20 j 10:16	9°♄04'11	2.67176 AU	min. Earth dist.	-2191 Oct 29 j 08:37	25°♄52'49	0.60840 AU
	-2196 Jul 23 j 05:48	0°♄		opposition	-2191 Nov 03 j 06:01	23°♄55'43	0°35'34
morning rise	-2196 Aug 04 j 04:32	7°♄38'44		greatest brilliancy	-2191 Nov 03 j 01:49	23°♄59'55	-1.6m
	-2196 Sep 07 j 22:05	0°♄		direct	-2191 Dec 10 j 21:27	15°♄08'25	
	-2196 Oct 23 j 22:47	0°♄			-2190 Feb 05 j 23:54	0°♄	
	-2196 Dec 08 j 10:22	0°♄			-2190 Apr 06 j 01:26	0°♄	
	-2195 Jan 22 j 19:52	0°♄			-2190 May 26 j 23:58	0°♄	
	-2195 Mar 10 j 10:18	0°♄			-2190 Jul 13 j 04:53	0°♄	
desc. node	-2195 Mar 12 j 03:45	1°♄04'22			-2190 Aug 26 j 11:29	0°♄	
	-2195 May 03 j 11:31	0°♄		evening set	-2190 Aug 29 j 10:07	2°♄03'33	
retrograde	-2195 Jun 16 j 02:44	11°♄04'15		max. Earth dist.	-2190 Sep 13 j 14:13	12°♄48'06	2.47288 AU
min. Earth dist.	-2195 Jul 13 j 10:15	6°♄36'33	0.38455 AU		-2190 Oct 07 j 06:50	0°♄	
opposition	-2195 Jul 17 j 18:53	5°♄23'16	-6°-42'-41				
greatest brilliancy	-2195 Jul 16 j 13:39	5°♄43'49	-2.8m	conjunction	-2190 Oct 21 j 02:53	10°♄16'02	0°08'05
direct	-2195 Aug 16 j 15:06	0°♄17'43		minimum elong	-2190 Oct 21 j 03:21	10°♄16'55	0°08'04
	-2195 Nov 06 j 00:40	0°♄		behind sun begin	-2190 Oct 20 j 06:39	9°♄38'15	
	-2195 Dec 26 j 03:07	0°♄		behind sun end	-2190 Oct 22 j 00:03	10°♄55'37	
asc. node	-2194 Jan 14 j 23:51	12°♄22'44		desc. node	-2190 Nov 02 j 00:30	19°♄13'05	
	-2194 Feb 12 j 01:56	0°♄			-2190 Nov 16 j 04:25	0°♄	
	-2194 Mar 31 j 21:23	0°♄		morning rise	-2190 Dec 19 j 04:16	25°♄32'10	
	-2194 May 18 j 17:01	0°♄			-2190 Dec 24 j 21:25	0°♄	
evening set	-2194 Jun 10 j 21:06	14°♄37'21			-2189 Feb 01 j 05:30	0°♄	
	-2194 Jul 05 j 00:54	0°♄		greatest brilliancy	-2189 Mar 01 j 18:47	22°♄07'58	1.2m
max. Earth dist.	-2194 Jul 13 j 21:31	5°♄41'08	2.65502 AU		-2189 Mar 12 j 01:37	0°♄	
					-2189 Apr 21 j 07:57	0°♄	
conjunction	-2194 Jul 27 j 02:18	14°♄12'24	1°10'30		-2189 Jun 03 j 01:38	0°♄	
minimum elong	-2194 Jul 27 j 02:11	14°♄12'13	1°10'32		-2189 Jul 19 j 23:46	0°♄	
	-2194 Aug 20 j 06:18	0°♄		asc. node	-2189 Sep 06 j 22:29	26°♄02'50	
morning rise	-2194 Sep 10 j 07:43	13°♄59'20			-2189 Sep 16 j 06:45	0°♄	
	-2194 Oct 04 j 00:14	0°♄		retrograde	-2189 Oct 30 j 03:55	9°♄58'06	
	-2194 Nov 16 j 05:30	0°♄		min. Earth dist.	-2189 Dec 08 j 00:43	0°♄37'12	0.66775 AU
	-2194 Dec 28 j 02:56	0°♄		opposition	-2189 Dec 09 j 05:00	0°♄08'45	3°12'15
desc. node	-2193 Jan 28 j 03:00	22°♄39'29		greatest brilliancy	-2189 Dec 08 j 23:02	0°♄14'45	-1.3m
	-2193 Feb 07 j 02:27	0°♄			-2189 Dec 09 j 13:43	30°♄	
	-2193 Mar 19 j 22:06	0°♄		direct	-2188 Jan 18 j 06:57	20°♄30'34	
	-2193 May 01 j 02:39	0°♄			-2188 Mar 02 j 11:32	0°♄	
	-2193 Jun 18 j 05:31	0°♄			-2188 May 03 j 08:11	0°♄	
retrograde	-2193 Aug 14 j 14:33	18°♄17'17			-2188 Jun 22 j 03:22	0°♄	
min. Earth dist.	-2193 Sep 13 j 03:18	12°♄16'56	0.49536 AU		-2188 Aug 06 j 03:55	0°♄	
opposition	-2193 Sep 20 j 23:26	9°♄24'38	-3°-26'-32		-2188 Sep 17 j 00:18	0°♄	
greatest brilliancy	-2193 Sep 19 j 16:32	9°♄53'05	-2.1m	desc. node	-2188 Sep 18 j 22:36	1°♄25'37	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 22

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

evening set	-2188 Oct 20 j 21:10	25°♄32'35		morning rise	-2183 Jun 14 j 14:33	18°♄32'41	
	-2188 Oct 26 j 16:07	0°♌			-2183 Jul 02 j 11:34	0°♐	
	-2188 Dec 04 j 01:43	0°♊			-2183 Aug 19 j 03:54	0°♍	
					-2183 Oct 07 j 06:27	0°♌	
conjunction	-2188 Dec 23 j 00:27	14°♊56'22	0°-56'-16		-2183 Nov 28 j 11:52	0°♐	
minimum elong	-2188 Dec 22 j 21:36	14°♊50'44	0°56'19		-2182 Feb 04 j 23:37	0°♌	
max. Earth dist.	-2187 Jan 07 j 04:09	26°♊52'27	2.37501 AU	retrograde	-2182 Mar 03 j 04:21	3°♌46'50	
	-2187 Jan 11 j 03:41	0°♊			-2182 Mar 28 j 01:53	30°♐	
	-2187 Feb 18 j 19:40	0°♋		opposition	-2182 Apr 06 j 03:11	27°♐08'20	2°01'20
morning rise	-2187 Mar 01 j 23:23	8°♋29'01		greatest brilliancy	-2182 Apr 07 j 04:01	26°♐47'33	-2.2m
	-2187 Mar 30 j 21:20	0°♋		min. Earth dist.	-2182 Apr 14 j 15:37	24°♐18'18	0.47251 AU
	-2187 May 12 j 01:22	0°♌		desc. node	-2182 May 11 j 19:53	19°♐02'12	
	-2187 Jun 25 j 22:35	0°♍		direct	-2182 May 13 j 08:47	19°♐01'13	
asc. node	-2187 Jul 24 j 22:11	18°♍12'45			-2182 Jun 25 j 15:26	0°♌	
	-2187 Aug 13 j 16:07	0°♐			-2182 Aug 16 j 09:06	0°♌	
	-2187 Oct 10 j 13:48	0°♍			-2182 Sep 27 j 22:24	0°♊	
retrograde	-2187 Dec 03 j 03:04	13°♍29'29			-2182 Nov 07 j 13:47	0°♊	
opposition	-2186 Jan 11 j 09:47	4°♍14'06	4°36'26		-2182 Dec 18 j 09:31	0°♋	
greatest brilliancy	-2186 Jan 11 j 21:16	4°♍02'44	-1.3m		-2181 Jan 29 j 10:14	0°♋	
min. Earth dist.	-2186 Jan 14 j 01:45	3°♍10'48	0.66362 AU		-2181 Mar 14 j 03:17	0°♌	
	-2186 Jan 22 j 10:25	30°♐		asc. node	-2181 Mar 16 j 17:57	1°♌45'21	
direct	-2186 Feb 21 j 14:32	24°♐13'24		evening set	-2181 Apr 17 j 16:22	22°♌56'10	
	-2186 Mar 26 j 14:37	0°♍			-2181 Apr 28 j 11:47	0°♍	
	-2186 May 29 j 06:45	0°♌					
	-2186 Jul 16 j 01:44	0°♐		conjunction	-2181 Jun 05 j 23:18	24°♍50'07	0°43'00
desc. node	-2186 Aug 06 j 22:02	15°♐01'55		minimum elong	-2181 Jun 05 j 22:00	24°♍48'02	0°43'02
	-2186 Aug 27 j 18:17	0°♌		max. Earth dist.	-2181 Jun 12 j 05:29	28°♍50'28	2.66343 AU
	-2186 Oct 06 j 15:32	0°♌			-2181 Jun 14 j 00:58	0°♐	
	-2186 Nov 14 j 02:17	0°♊		morning rise	-2181 Jul 22 j 04:41	24°♐19'17	
	-2186 Dec 22 j 05:31	0°♊			-2181 Jul 31 j 02:52	0°♍	
evening set	-2186 Dec 28 j 07:05	4°♊44'30			-2181 Sep 16 j 04:29	0°♌	
	-2185 Jan 30 j 00:36	0°♋			-2181 Nov 02 j 02:52	0°♐	
					-2181 Dec 19 j 08:19	0°♌	
conjunction	-2185 Mar 02 j 21:56	23°♋52'45	0°-53'-50		-2180 Feb 06 j 06:45	0°♌	
minimum elong	-2185 Mar 03 j 00:26	23°♋57'21	0°53'51	desc. node	-2180 Mar 28 j 19:42	27°♌25'06	
	-2185 Mar 11 j 06:35	0°♋			-2180 Apr 03 j 20:34	0°♊	
max. Earth dist.	-2185 Apr 15 j 07:02	24°♋58'38	2.49537 AU	retrograde	-2180 May 16 j 09:24	9°♊51'25	
	-2185 Apr 22 j 12:27	0°♌		opposition	-2180 Jun 15 j 16:38	4°♊50'44	-5°-11'00
morning rise	-2185 May 01 j 23:00	6°♌29'53		greatest brilliancy	-2180 Jun 15 j 19:44	4°♊48'42	-2.9m
	-2185 Jun 05 j 23:53	0°♍		min. Earth dist.	-2180 Jun 16 j 12:17	4°♊37'45	0.37684 AU
asc. node	-2185 Jun 11 j 20:50	3°♍50'54			-2180 Jul 09 j 21:16	30°♐	
	-2185 Jul 22 j 19:24	0°♐		direct	-2180 Jul 15 j 22:03	29°♌45'28	
	-2185 Sep 10 j 12:15	0°♍			-2180 Jul 21 j 23:51	0°♊	
	-2185 Nov 05 j 16:38	0°♌			-2180 Oct 04 j 00:28	0°♊	
retrograde	-2184 Jan 11 j 12:46	19°♌13'44			-2180 Nov 20 j 18:28	0°♋	
opposition	-2184 Feb 17 j 21:42	10°♌56'33	4°38'14		-2179 Jan 05 j 12:50	0°♋	
greatest brilliancy	-2184 Feb 19 j 06:47	10°♌25'09	-1.6m	asc. node	-2179 Jan 31 j 16:16	17°♋05'31	
min. Earth dist.	-2184 Feb 24 j 07:06	8°♌31'16	0.59477 AU		-2179 Feb 20 j 13:52	0°♌	
direct	-2184 Mar 29 j 13:48	1°♌10'28			-2179 Apr 08 j 09:14	0°♍	
	-2184 Jun 18 j 00:12	0°♐			-2179 May 25 j 16:33	0°♐	
desc. node	-2184 Jun 23 j 21:19	3°♐28'33		evening set	-2179 May 27 j 01:40	0°♐52'29	
	-2184 Aug 03 j 13:21	0°♌		max. Earth dist.	-2179 Jul 04 j 17:00	25°♐26'20	2.66792 AU
	-2184 Sep 13 j 19:31	0°♌			-2179 Jul 11 j 20:09	0°♍	
	-2184 Oct 22 j 23:03	0°♊					
	-2184 Nov 30 j 15:06	0°♊		conjunction	-2179 Jul 12 j 14:59	0°♍30'10	1°07'42
	-2183 Jan 08 j 22:48	0°♋		minimum elong	-2179 Jul 12 j 14:19	0°♍29'06	1°07'44
	-2183 Feb 18 j 17:37	0°♋		morning rise	-2179 Aug 26 j 12:47	29°♍34'44	
evening set	-2183 Feb 28 j 08:24	6°♋52'44			-2179 Aug 27 j 04:12	0°♌	
	-2183 Apr 02 j 10:38	0°♌			-2179 Oct 11 j 07:35	0°♐	
					-2179 Nov 24 j 04:50	0°♌	
conjunction	-2183 Apr 24 j 18:25	15°♌08'49	0°-2'-23		-2178 Jan 06 j 00:45	0°♌	
minimum elong	-2183 Apr 24 j 18:33	15°♌09'03	0°02'23	desc. node	-2178 Feb 13 j 20:00	27°♌34'50	
behind sun begin	-2183 Apr 23 j 20:46	14°♌32'30			-2178 Feb 17 j 05:34	0°♊	
behind sun end	-2183 Apr 25 j 16:21	15°♌45'35			-2178 Mar 31 j 19:43	0°♊	
asc. node	-2183 Apr 28 j 18:56	17°♌50'25			-2178 May 16 j 19:53	0°♋	
	-2183 May 17 j 02:54	0°♍		retrograde	-2178 Jul 25 j 11:18	25°♋32'34	
max. Earth dist.	-2183 May 17 j 15:07	0°♍20'06	2.60468 AU	min. Earth dist.	-2178 Aug 21 j 22:32	20°♋25'24	0.44492 AU

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 23

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

greatest brilliancy	-2178 Aug 28 j 03:27	18° \approx 20'32	-2.4m		-2173 Nov 04 j 02:17	0° \mathbb{M}	
opposition	-2178 Aug 29 j 23:29	17° \approx 43'14	-5°-14'-23				
direct	-2178 Oct 01 j 02:23	11° \approx 21'04		conjunction	-2173 Nov 26 j 21:08	17° \mathbb{M} 41'23	0°-33'-57
	-2178 Dec 02 j 19:48	0° \mathbb{H}		minimum elong	-2173 Nov 26 j 18:43	17° \mathbb{M} 36'40	0°33'58
asc. node	-2178 Dec 19 j 14:52	8° \mathbb{H} 30'34			-2173 Dec 12 j 13:53	0° \mathbb{Z}	
	-2177 Jan 27 j 04:20	0° \mathbb{Y}			-2172 Jan 19 j 17:06	0° \mathbb{Z}	
	-2177 Mar 18 j 16:23	0° \mathbb{B}		morning rise	-2172 Feb 01 j 23:21	10° \mathbb{Z} 22'01	
	-2177 May 06 j 17:26	0° \mathbb{H}			-2172 Feb 27 j 09:21	0° \approx	
	-2177 Jun 23 j 13:18	0° \mathbb{S}			-2172 Apr 07 j 10:55	0° \mathbb{H}	
evening set	-2177 Jul 04 j 00:52	6° \mathbb{S} 42'11			-2172 May 19 j 16:54	0° \mathbb{Y}	
max. Earth dist.	-2177 Jul 29 j 13:12	23° \mathbb{S} 14'56	2.61890 AU		-2172 Jul 04 j 00:41	0° \mathbb{B}	
	-2177 Aug 08 j 19:14	0° \mathbb{Q}		asc. node	-2172 Aug 10 j 12:20	22° \mathbb{B} 42'39	
					-2172 Aug 23 j 12:30	0° \mathbb{H}	
conjunction	-2177 Aug 19 j 14:35	7° \mathbb{Q} 11'03	1°05'55		-2172 Nov 08 j 18:52	0° \mathbb{S}	
minimum elong	-2177 Aug 19 j 15:27	7° \mathbb{Q} 12'30	1°05'57	retrograde	-2172 Nov 19 j 08:07	0° \mathbb{S} 40'16	
	-2177 Sep 22 j 04:41	0° \mathbb{M}			-2172 Nov 29 j 10:50	30° \mathbb{R} \mathbb{H}	
morning rise	-2177 Oct 05 j 12:23	9° \mathbb{M} 15'38		opposition	-2172 Dec 29 j 01:05	21° \mathbb{H} 09'00	4°12'11
	-2177 Nov 03 j 17:45	0° \mathbb{A}		greatest brilliancy	-2172 Dec 29 j 04:25	21° \mathbb{H} 05'40	-1.2m
	-2177 Dec 14 j 17:10	0° \mathbb{M}		min. Earth dist.	-2172 Dec 30 j 04:35	20° \mathbb{H} 41'33	0.67307 AU
desc. node	-2176 Jan 01 j 18:36	13° \mathbb{M} 30'41		direct	-2171 Feb 07 j 23:26	11° \mathbb{H} 13'50	
	-2176 Jan 23 j 14:18	0° \mathbb{Z}			-2171 Apr 14 j 11:21	0° \mathbb{S}	
	-2176 Mar 03 j 02:01	0° \mathbb{Z}			-2171 Jun 08 j 01:35	0° \mathbb{Q}	
	-2176 Apr 12 j 04:46	0° \approx			-2171 Jul 24 j 09:07	0° \mathbb{M}	
	-2176 May 24 j 15:43	0° \mathbb{H}		desc. node	-2171 Aug 23 j 15:00	21° \mathbb{M} 15'12	
	-2176 Jul 13 j 02:29	0° \mathbb{Y}			-2171 Sep 04 j 15:04	0° \mathbb{A}	
retrograde	-2176 Sep 09 j 10:51	17° \mathbb{Y} 59'02			-2171 Oct 14 j 09:03	0° \mathbb{M}	
min. Earth dist.	-2176 Oct 12 j 07:16	10° \mathbb{Y} 42'16	0.56920 AU		-2171 Nov 21 j 18:25	0° \mathbb{Z}	
opposition	-2176 Oct 18 j 13:08	8° \mathbb{Y} 15'30	0°-47'-49	evening set	-2171 Nov 30 j 12:55	6° \mathbb{Z} 55'02	
greatest brilliancy	-2176 Oct 18 j 06:45	8° \mathbb{Y} 21'45	-1.8m		-2171 Dec 29 j 20:06	0° \mathbb{Z}	
asc. node	-2176 Nov 05 j 14:35	2° \mathbb{Y} 13'19					
	-2176 Nov 21 j 19:35	30° \mathbb{R} \mathbb{H}		conjunction	-2170 Feb 04 j 23:29	28° \mathbb{Z} 48'46	-1°-5'-15
direct	-2176 Nov 23 j 20:49	29° \mathbb{H} 58'22		minimum elong	-2170 Feb 05 j 00:39	28° \mathbb{Z} 51'02	1°05'18
	-2176 Nov 25 j 22:31	0° \mathbb{Y}			-2170 Feb 06 j 12:46	0° \approx	
	-2175 Feb 19 j 23:43	0° \mathbb{B}			-2170 Mar 18 j 15:34	0° \mathbb{H}	
	-2175 Apr 14 j 22:21	0° \mathbb{H}		max. Earth dist.	-2170 Mar 26 j 12:11	5° \mathbb{H} 42'58	2.44244 AU
	-2175 Jun 03 j 13:05	0° \mathbb{S}		morning rise	-2170 Apr 10 j 16:58	16° \mathbb{H} 36'51	
	-2175 Jul 20 j 07:46	0° \mathbb{Q}			-2170 Apr 29 j 18:48	0° \mathbb{Y}	
evening set	-2175 Aug 12 j 01:42	15° \mathbb{Q} 13'27			-2170 Jun 13 j 07:00	0° \mathbb{B}	
max. Earth dist.	-2175 Aug 28 j 09:03	26° \mathbb{Q} 24'24	2.52109 AU	asc. node	-2170 Jun 28 j 12:02	9° \mathbb{B} 51'56	
	-2175 Sep 02 j 13:05	0° \mathbb{M}			-2170 Jul 30 j 13:09	0° \mathbb{H}	
					-2170 Sep 19 j 22:48	0° \mathbb{S}	
conjunction	-2175 Oct 01 j 01:57	20° \mathbb{M} 15'20	0°31'09		-2170 Nov 25 j 17:54	0° \mathbb{Q}	
minimum elong	-2175 Oct 01 j 03:22	20° \mathbb{M} 17'53	0°31'09	retrograde	-2170 Dec 26 j 07:49	4° \mathbb{Q} 56'56	
	-2175 Oct 14 j 11:20	0° \mathbb{A}			-2169 Jan 23 j 07:42	30° \mathbb{R} \mathbb{S}	
desc. node	-2175 Nov 18 j 17:32	26° \mathbb{A} 18'51		opposition	-2169 Feb 02 j 14:30	26° \mathbb{S} 13'27	4°49'50
	-2175 Nov 23 j 13:55	0° \mathbb{M}		greatest brilliancy	-2169 Feb 03 j 15:47	25° \mathbb{S} 48'57	-1.4m
morning rise	-2175 Nov 24 j 06:30	0° \mathbb{M} 31'35		min. Earth dist.	-2169 Feb 07 j 13:57	24° \mathbb{S} 17'48	0.62913 AU
	-2174 Jan 01 j 12:13	0° \mathbb{Z}		direct	-2169 Mar 15 j 17:31	16° \mathbb{S} 15'35	
	-2174 Feb 09 j 00:58	0° \mathbb{Z}			-2169 May 07 j 10:19	0° \mathbb{Q}	
	-2174 Mar 20 j 01:20	0° \approx			-2169 Jun 30 j 15:40	0° \mathbb{M}	
	-2174 Apr 29 j 13:22	0° \mathbb{H}		desc. node	-2169 Jul 11 j 13:21	7° \mathbb{M} 02'05	
	-2174 Jun 11 j 21:15	0° \mathbb{Y}			-2169 Aug 13 j 22:57	0° \mathbb{A}	
	-2174 Jul 30 j 22:23	0° \mathbb{B}			-2169 Sep 23 j 11:05	0° \mathbb{M}	
asc. node	-2174 Sep 23 j 14:06	23° \mathbb{B} 32'31			-2169 Nov 01 j 05:30	0° \mathbb{Z}	
retrograde	-2174 Oct 16 j 16:28	26° \mathbb{B} 42'46			-2169 Dec 09 j 14:37	0° \mathbb{Z}	
min. Earth dist.	-2174 Nov 23 j 01:44	17° \mathbb{B} 51'07	0.65192 AU		-2168 Jan 17 j 15:45	0° \approx	
opposition	-2174 Nov 25 j 17:46	16° \mathbb{B} 46'41	2°20'45	evening set	-2168 Feb 06 j 16:41	15° \approx 00'20	
greatest brilliancy	-2174 Nov 25 j 09:04	16° \mathbb{B} 55'26	-1.4m		-2168 Feb 27 j 03:55	0° \mathbb{H}	
direct	-2173 Jan 04 j 00:38	7° \mathbb{B} 24'47					
	-2173 Mar 19 j 06:33	0° \mathbb{H}		conjunction	-2168 Apr 05 j 15:13	27° \mathbb{H} 14'39	0°-23'-21
	-2173 May 13 j 11:19	0° \mathbb{S}		minimum elong	-2168 Apr 05 j 16:30	27° \mathbb{H} 16'52	0°23'22
	-2173 Jun 30 j 22:27	0° \mathbb{Q}			-2168 Apr 09 j 14:56	0° \mathbb{Y}	
	-2173 Aug 14 j 13:56	0° \mathbb{M}		max. Earth dist.	-2168 May 06 j 06:48	18° \mathbb{Y} 07'35	2.56718 AU
	-2173 Sep 25 j 08:56	0° \mathbb{A}		asc. node	-2168 May 15 j 11:35	24° \mathbb{Y} 16'00	
evening set	-2173 Sep 29 j 02:37	2° \mathbb{A} 45'56			-2168 May 24 j 03:27	0° \mathbb{B}	
desc. node	-2173 Oct 06 j 16:39	8° \mathbb{A} 25'05		morning rise	-2168 May 29 j 11:16	3° \mathbb{B} 30'08	
max. Earth dist.	-2173 Oct 23 j 13:03	21° \mathbb{A} 09'02	2.39755 AU		-2168 Jul 09 j 13:31	0° \mathbb{H}	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 24

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2168 Aug 26 j 18:09	0°☿				-2163 Oct 23 j 13:58	0°♊	
	-2168 Oct 16 j 11:21	0°♈				-2163 Dec 18 j 13:41	0°♋	
	-2168 Dec 13 j 16:34	0°♌		asc. node		-2162 Jan 05 j 06:43	10°♌32'50	
retrograde	-2167 Feb 08 j 20:03	14°♍54'50				-2162 Feb 06 j 05:02	0°♎	
opposition	-2167 Mar 16 j 08:22	7°♍31'18	3°31'08			-2162 Mar 26 j 18:28	0°♏	
greatest brilliancy	-2167 Mar 17 j 20:43	6°♍58'44	-1.9m			-2162 May 13 j 23:00	0°♐	
min. Earth dist.	-2167 Mar 24 j 12:22	4°♍36'47	0.52444 AU	evening set		-2162 Jun 19 j 06:38	22°♐53'11	
	-2167 Apr 09 j 16:15	30°♎♈				-2162 Jun 30 j 10:40	0°☿	
direct	-2167 Apr 24 j 10:20	28°♎30'07		max. Earth dist.		-2162 Jul 19 j 11:32	12°☿14'12	2.64451 AU
	-2167 May 09 j 16:35	0°♎						
desc. node	-2167 May 28 j 12:40	5°♎24'00		conjunction		-2162 Aug 04 j 11:36	22°☿38'34	1°10'08
	-2167 Jul 15 j 10:16	0°♏		minimum elong		-2162 Aug 04 j 11:51	22°☿38'58	1°10'11
	-2167 Aug 28 j 19:33	0°♐				-2162 Aug 15 j 16:20	0°♈	
	-2167 Oct 08 j 07:24	0°♑		morning rise		-2162 Sep 19 j 02:56	23°♈03'09	
	-2167 Nov 16 j 20:06	0°♒				-2162 Sep 29 j 07:24	0°♎	
	-2167 Dec 26 j 20:44	0°♊				-2162 Nov 11 j 06:36	0°♏	
	-2166 Feb 06 j 06:18	0°♋				-2162 Dec 22 j 19:21	0°♐	
	-2166 Mar 21 j 11:32	0°♌		desc. node		-2161 Jan 18 j 12:36	19°♐43'36	
evening set	-2166 Mar 31 j 04:49	6°♌34'28				-2161 Feb 01 j 07:41	0°♑	
asc. node	-2166 Apr 02 j 09:24	8°♌02'55				-2161 Mar 13 j 12:32	0°♒	
	-2166 May 05 j 11:54	0°♍				-2161 Apr 23 j 15:53	0°♊	
						-2161 Jun 07 j 12:35	0°♋	
conjunction	-2166 May 21 j 10:03	10°♍22'32	0°27'28			-2161 Aug 20 j 15:14	0°♌	
minimum elong	-2166 May 21 j 09:00	10°♍20'50	0°27'30	retrograde		-2161 Aug 24 j 22:07	0°♌07'57	
max. Earth dist.	-2166 Jun 02 j 15:12	18°♍16'24	2.64689 AU			-2161 Aug 29 j 03:44	30°♌♈	
	-2166 Jun 20 j 21:39	0°♐		min. Earth dist.		-2161 Sep 24 j 16:25	23°♌38'38	0.52308 AU
morning rise	-2166 Jul 08 j 00:11	10°♐54'45		greatest brilliancy		-2161 Oct 01 j 04:05	21°♌11'26	-2.0m
	-2166 Aug 07 j 02:37	0°☿		opposition		-2161 Oct 02 j 01:38	20°♌51'00	-2°-25'-10
	-2166 Sep 23 j 17:42	0°♈		direct		-2161 Nov 05 j 20:41	13°♌11'40	
	-2166 Nov 10 j 23:49	0°♎		asc. node		-2161 Nov 23 j 05:21	14°♌59'58	
	-2166 Dec 31 j 05:44	0°♏				-2160 Jan 05 j 04:21	0°♎	
	-2165 Feb 28 j 04:06	0°♐				-2160 Mar 02 j 18:03	0°♍	
retrograde	-2165 Apr 15 j 08:24	10°♐51'07				-2160 Apr 23 j 01:42	0°♐	
desc. node	-2165 Apr 15 j 11:52	10°♐51'07				-2160 Jun 10 j 19:12	0°☿	
opposition	-2165 May 16 j 12:11	5°♐28'54	-2°-5'-46	evening set		-2160 Jul 26 j 22:30	29°☿45'20	
greatest brilliancy	-2165 May 17 j 02:26	5°♐18'39	-2.7m			-2160 Jul 27 j 07:23	0°♈	
min. Earth dist.	-2165 May 22 j 03:13	3°♐52'08	0.39985 AU	max. Earth dist.		-2160 Aug 15 j 05:49	12°♈38'58	2.56487 AU
	-2165 Jun 08 j 20:07	30°♑♏				-2160 Sep 09 j 13:33	0°♎	
direct	-2165 Jun 18 j 10:18	29°♏22'16						
	-2165 Jun 27 j 23:20	0°♐		conjunction		-2160 Sep 13 j 01:39	2°♎26'28	0°48'57
	-2165 Sep 05 j 03:18	0°♑		minimum elong		-2160 Sep 13 j 03:11	2°♎29'08	0°48'58
	-2165 Oct 20 j 16:19	0°♒				-2160 Oct 21 j 16:47	0°♏	
	-2165 Dec 03 j 01:07	0°♊		morning rise		-2160 Nov 02 j 12:51	8°♏40'20	
	-2164 Jan 15 j 17:29	0°♋				-2160 Dec 01 j 02:22	0°♐	
asc. node	-2164 Feb 18 j 07:41	22°♌33'31		desc. node		-2160 Dec 05 j 11:03	3°♐18'02	
	-2164 Feb 29 j 13:37	0°♎				-2159 Jan 09 j 08:02	0°♑	
	-2164 Apr 15 j 15:50	0°♍				-2159 Feb 17 j 03:24	0°♒	
evening set	-2164 May 11 j 21:55	16°♍49'17				-2159 Mar 28 j 10:14	0°♊	
	-2164 Jun 01 j 14:10	0°♐				-2159 May 08 j 08:08	0°♋	
max. Earth dist.	-2164 Jun 25 j 17:31	15°♐22'09	2.67272 AU			-2159 Jun 21 j 17:51	0°♌	
						-2159 Aug 14 j 17:28	0°♍	
conjunction	-2164 Jun 28 j 04:29	16°♐56'05	1°00'57	retrograde		-2159 Oct 02 j 19:39	12°♍46'01	
minimum elong	-2164 Jun 28 j 03:24	16°♐54'22	1°01'00	asc. node		-2159 Oct 10 j 04:46	12°♍23'10	
	-2164 Jul 18 j 15:36	0°☿		min. Earth dist.		-2159 Nov 07 j 13:48	4°♍27'37	0.62635 AU
morning rise	-2164 Aug 12 j 05:59	15°☿47'45		opposition		-2159 Nov 11 j 17:00	2°♍48'14	1°17'57
	-2164 Sep 03 j 04:30	0°♈		greatest brilliancy		-2159 Nov 11 j 09:29	2°♍55'45	-1.5m
	-2164 Oct 18 j 20:32	0°♎				-2159 Nov 18 j 22:01	30°♌♎	
	-2164 Dec 02 j 15:43	0°♏		direct		-2159 Dec 19 j 23:59	23°♎47'09	
	-2163 Jan 15 j 21:20	0°♐				-2158 Jan 23 j 14:40	0°♍	
	-2163 Mar 01 j 06:12	0°♑				-2158 Mar 30 j 14:56	0°♐	
desc. node	-2163 Mar 02 j 12:00	0°♑49'41				-2158 May 21 j 18:14	0°☿	
	-2163 Apr 17 j 02:40	0°♒				-2158 Jul 08 j 09:03	0°♈	
retrograde	-2163 Jul 01 j 14:18	28°♒31'28				-2158 Aug 21 j 19:03	0°♎	
min. Earth dist.	-2163 Jul 28 j 05:44	24°♒01'40	0.40138 AU	evening set		-2158 Sep 08 j 23:37	12°♒50'54	
greatest brilliancy	-2163 Aug 01 j 22:33	22°♒37'30	-2.7m	max. Earth dist.		-2158 Sep 24 j 22:42	24°♒22'55	2.44510 AU
opposition	-2163 Aug 03 j 16:32	22°♒06'01	-6°-34'-34			-2158 Oct 02 j 14:30	0°♏	
direct	-2163 Sep 03 j 00:23	16°♒38'05		desc. node		-2158 Oct 23 j 09:02	15°♏29'16	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 25

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

conjunction	-2158 Nov 02 j 13:54	23°♄13'15	0°-6'-59			-2153 Oct 28 j 05:57	0°♂	
minimum elong	-2158 Nov 02 j 13:26	23°♄12'21	0°07'01	retrograde		-2152 Jan 21 j 13:10	28°♂23'26	
behind sun begin	-2158 Nov 01 j 14:57	22°♄29'35		opposition		-2152 Feb 27 j 07:53	20°♂23'25	4°21'38
behind sun end	-2158 Nov 03 j 11:55	23°♄55'10		greatest brilliancy		-2152 Feb 28 j 19:49	19°♂49'51	-1.7m
	-2158 Nov 11 j 10:48	0°♌		min. Earth dist.		-2152 Mar 05 j 10:40	17°♂44'33	0.57161 AU
	-2158 Dec 20 j 01:55	0°♊		direct		-2152 Apr 07 j 13:52	10°♂49'13	
morning rise	-2157 Jan 03 j 16:27	11°♊27'25				-2152 Jun 08 j 16:45	0°♐	
	-2157 Jan 27 j 07:59	0°♊		desc. node		-2152 Jun 14 j 04:49	2°♐56'19	
	-2157 Mar 07 j 02:09	0°♐				-2152 Jul 27 j 23:11	0°♌	
	-2157 Apr 16 j 05:39	0°♏				-2152 Sep 08 j 00:04	0°♌	
	-2157 May 28 j 16:47	0°♐				-2152 Oct 17 j 12:35	0°♊	
	-2157 Jul 13 j 19:21	0°♏				-2152 Nov 25 j 10:21	0°♊	
asc. node	-2157 Aug 28 j 04:53	25°♏46'48				-2151 Jan 03 j 22:42	0°♐	
	-2157 Sep 05 j 17:55	0°♐				-2151 Feb 13 j 21:28	0°♏	
retrograde	-2157 Nov 06 j 20:46	17°♐51'57		evening set		-2151 Mar 12 j 02:03	18°♏30'28	
opposition	-2157 Dec 16 j 20:05	8°♐08'04	3°37'22			-2151 Mar 28 j 17:27	0°♐	
min. Earth dist.	-2157 Dec 16 j 11:13	8°♐16'56	0.67235 AU	asc. node		-2151 Apr 19 j 01:54	14°♐27'57	
greatest brilliancy	-2157 Dec 16 j 16:45	8°♐11'23	-1.3m					
	-2156 Jan 10 j 10:58	30°♏		conjunction		-2151 May 04 j 19:41	24°♐56'55	0°09'11
direct	-2156 Jan 26 j 06:45	28°♏22'49		minimum elong		-2151 May 04 j 19:16	24°♐56'14	0°09'12
	-2156 Feb 12 j 04:28	0°♐		behind sun begin		-2151 May 04 j 01:40	24°♐27'07	
	-2156 Apr 26 j 15:59	0°♏		behind sun end		-2151 May 05 j 12:52	25°♐25'19	
	-2156 Jun 16 j 18:40	0°♂				-2151 May 12 j 11:27	0°♏	
	-2156 Aug 01 j 05:26	0°♐		max. Earth dist.		-2151 May 23 j 17:50	7°♏22'43	2.62193 AU
desc. node	-2156 Sep 09 j 07:59	27°♐52'33		morning rise		-2151 Jun 23 j 07:42	27°♏07'52	
	-2156 Sep 12 j 05:14	0°♌				-2151 Jun 27 j 19:23	0°♐	
	-2156 Oct 21 j 21:54	0°♌				-2151 Aug 14 j 06:18	0°♏	
evening set	-2156 Nov 03 j 21:18	10°♌03'53				-2151 Oct 01 j 17:19	0°♂	
	-2156 Nov 29 j 07:14	0°♊				-2151 Nov 21 j 01:50	0°♐	
	-2155 Jan 06 j 08:32	0°♊				-2150 Jan 17 j 00:21	0°♌	
				retrograde		-2150 Mar 17 j 14:03	16°♌16'02	
conjunction	-2155 Jan 07 j 23:20	1°♊16'09	-1°-3'-46	opposition		-2150 Apr 19 j 11:05	10°♌05'46	0°47'00
minimum elong	-2155 Jan 07 j 21:36	1°♊12'44	1°03'49	greatest brilliancy		-2150 Apr 19 j 21:21	9°♌57'36	-2.4m
	-2155 Feb 14 j 00:01	0°♐		min. Earth dist.		-2150 Apr 27 j 14:13	7°♌31'06	0.44377 AU
max. Earth dist.	-2155 Feb 21 j 10:08	5°♐39'21	2.39236 AU	desc. node		-2150 May 02 j 05:13	6°♌08'56	
morning rise	-2155 Mar 17 j 06:28	23°♐32'19		direct		-2150 May 25 j 08:49	2°♌38'07	
	-2155 Mar 26 j 01:10	0°♏				-2150 Aug 06 j 12:51	0°♌	
	-2155 May 07 j 03:33	0°♐				-2150 Sep 20 j 13:59	0°♊	
	-2155 Jun 20 j 19:36	0°♏				-2150 Nov 01 j 06:24	0°♊	
asc. node	-2155 Jul 15 j 04:04	15°♏32'05				-2150 Dec 12 j 17:18	0°♐	
	-2155 Aug 07 j 19:39	0°♐				-2149 Jan 24 j 04:46	0°♏	
	-2155 Oct 01 j 06:55	0°♏		asc. node		-2149 Mar 06 j 23:21	28°♏29'37	
retrograde	-2155 Dec 11 j 08:15	21°♏27'59				-2149 Mar 09 j 05:21	0°♐	
opposition	-2154 Jan 19 j 07:35	12°♏22'53	4°45'05			-2149 Apr 23 j 18:57	0°♏	
greatest brilliancy	-2154 Jan 19 j 23:53	12°♏06'51	-1.3m	evening set		-2149 Apr 27 j 03:16	2°♏10'15	
min. Earth dist.	-2154 Jan 22 j 19:12	11°♏00'42	0.65406 AU			-2149 Jun 09 j 10:35	0°♐	
direct	-2154 Mar 01 j 13:35	2°♏21'37						
	-2154 May 22 j 00:13	0°♂		conjunction		-2149 Jun 14 j 13:29	3°♐16'09	0°50'34
	-2154 Jul 10 j 08:57	0°♐		minimum elong		-2149 Jun 14 j 12:11	3°♐14'05	0°50'37
desc. node	-2154 Jul 28 j 06:40	12°♐05'31		max. Earth dist.		-2149 Jun 17 j 14:52	5°♐13'14	2.66916 AU
	-2154 Aug 22 j 13:12	0°♌				-2149 Jul 26 j 11:40	0°♏	
	-2154 Oct 01 j 15:22	0°♌		morning rise		-2149 Jul 30 j 05:31	2°♏23'19	
	-2154 Nov 09 j 04:33	0°♊				-2149 Sep 11 j 08:03	0°♂	
	-2154 Dec 17 j 09:13	0°♊				-2149 Oct 27 j 17:50	0°♐	
evening set	-2153 Jan 12 j 11:07	20°♊14'16				-2149 Dec 12 j 21:51	0°♌	
	-2153 Jan 25 j 05:31	0°♐				-2148 Jan 28 j 13:29	0°♌	
	-2153 Mar 06 j 12:34	0°♏				-2148 Mar 17 j 23:38	0°♊	
				desc. node		-2148 Mar 19 j 05:38	0°♊42'19	
conjunction	-2153 Mar 16 j 05:26	7°♏01'20	0°-43'-45	retrograde		-2148 Jun 03 j 03:06	27°♊47'19	
minimum elong	-2153 Mar 16 j 07:46	7°♏05'32	0°43'44	min. Earth dist.		-2148 Jul 01 j 17:34	23°♊07'36	0.37709 AU
	-2153 Apr 17 j 18:56	0°♐		opposition		-2148 Jul 03 j 21:34	22°♊32'36	-6°-20'-3
max. Earth dist.	-2153 Apr 24 j 05:09	4°♐25'47	2.52257 AU	greatest brilliancy		-2148 Jul 03 j 07:01	22°♊42'25	-2.9m
morning rise	-2153 May 12 j 20:32	17°♐06'10		direct		-2148 Aug 02 j 16:13	17°♊35'07	
	-2153 Jun 01 j 05:28	0°♏				-2148 Sep 19 j 00:33	0°♊	
asc. node	-2153 Jun 02 j 02:55	0°♏35'19				-2148 Nov 12 j 09:53	0°♐	
	-2153 Jul 17 j 19:45	0°♐				-2148 Dec 30 j 03:41	0°♏	
	-2153 Sep 04 j 19:34	0°♏		asc. node		-2147 Jan 21 j 21:20	14°♏31'49	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 26

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2147 Feb 15 j 02:54	0°♄				-2143 Dec 27 j 15:54	0°♂		
	-2147 Apr 03 j 10:23	0°♂				-2142 Feb 04 j 01:46	0°♂		
	-2147 May 21 j 00:10	0°♂				-2142 Mar 14 j 22:53	0°♂		
evening set	-2147 Jun 04 j 14:31	9°♂13'37				-2142 Apr 24 j 06:13	0°♂		
	-2147 Jul 07 j 06:15	0°♂				-2142 Jun 06 j 03:05	0°♄		
max. Earth dist.	-2147 Jul 10 j 01:59	1°♂48'26	2.66187 AU			-2142 Jul 23 j 15:46	0°♂		
					asc. node	-2142 Sep 13 j 19:47	26°♂02'40		
conjunction	-2147 Jul 20 j 21:53	8°♂45'55	1°09'49			-2142 Sep 25 j 05:59	0°♂		
minimum elong	-2147 Jul 20 j 21:32	8°♂45'21	1°09'52		retrograde	-2142 Oct 24 j 10:52	4°♂50'49		
	-2147 Aug 22 j 13:23	0°♂				-2142 Nov 20 j 09:51	30°♂		
morning rise	-2147 Sep 03 j 22:07	8°♂09'31			min. Earth dist.	-2142 Dec 01 j 16:32	25°♂42'44	0.66188 AU	
	-2147 Oct 06 j 12:01	0°♂			opposition	-2142 Dec 03 j 13:10	24°♂57'51	2°52'09	
	-2147 Nov 19 j 00:39	0°♂			greatest brilliancy	-2142 Dec 03 j 05:29	25°♂05'34	-1.3m	
	-2147 Dec 31 j 07:47	0°♂			direct	-2141 Jan 12 j 07:42	15°♂26'29		
desc. node	-2146 Feb 04 j 04:40	25°♂12'13				-2141 Mar 10 j 01:31	0°♂		
	-2146 Feb 10 j 19:04	0°♂				-2141 May 07 j 13:48	0°♂		
	-2146 Mar 24 j 05:43	0°♂				-2141 Jun 25 j 19:56	0°♂		
	-2146 May 06 j 13:40	0°♂				-2141 Aug 09 j 17:56	0°♂		
	-2146 Jun 28 j 13:00	0°♂				-2141 Sep 20 j 14:56	0°♂		
retrograde	-2146 Aug 06 j 06:22	9°♂18'37			desc. node	-2141 Sep 27 j 00:19	4°♂44'10		
min. Earth dist.	-2146 Sep 03 j 20:27	3°♂41'58	0.47248 AU		evening set	-2141 Oct 11 j 16:18	15°♂44'26		
greatest brilliancy	-2146 Sep 10 j 07:47	1°♂24'24	-2.2m			-2141 Oct 30 j 08:18	0°♂		
opposition	-2146 Sep 11 j 21:19	0°♂50'53	-4°-13'-41		max. Earth dist.	-2141 Nov 22 j 10:04	17°♂55'36	2.37845 AU	
	-2146 Sep 14 j 07:04	30°♂				-2141 Dec 07 j 19:17	0°♂		
direct	-2146 Oct 14 j 23:51	23°♂58'53							
	-2146 Nov 16 j 17:41	0°♂			conjunction	-2141 Dec 11 j 22:12	3°♂14'41	0°-47'-44	
asc. node	-2146 Dec 09 j 21:13	9°♂11'08			minimum elong	-2141 Dec 11 j 19:12	3°♂08'46	0°47'45	
	-2145 Jan 19 j 20:10	0°♄				-2140 Jan 14 j 21:39	0°♂		
	-2145 Mar 13 j 01:09	0°♂			morning rise	-2140 Feb 18 j 13:00	26°♂55'54		
	-2145 May 01 j 18:11	0°♂				-2140 Feb 22 j 13:04	0°♂		
	-2145 Jun 18 j 20:59	0°♂				-2140 Apr 02 j 13:33	0°♂		
evening set	-2145 Jul 12 j 14:41	15°♂12'37				-2140 May 14 j 16:34	0°♄		
	-2145 Aug 04 j 05:18	0°♂				-2140 Jun 28 j 15:50	0°♂		
max. Earth dist.	-2145 Aug 04 j 16:49	0°♂19'02	2.60173 AU		asc. node	-2140 Jul 31 j 19:21	20°♂35'04		
						-2140 Aug 16 j 21:43	0°♂		
conjunction	-2145 Aug 28 j 13:43	16°♂17'56	1°01'13			-2140 Oct 17 j 09:05	0°♂		
minimum elong	-2145 Aug 28 j 14:54	16°♂19'56	1°01'14		retrograde	-2140 Nov 27 j 04:37	8°♂28'11		
	-2145 Sep 17 j 13:49	0°♂				-2139 Jan 03 j 09:14	30°♂		
morning rise	-2145 Oct 15 j 11:34	19°♂35'51			opposition	-2139 Jan 05 j 16:38	29°♂05'08	4°27'30	
	-2145 Oct 29 j 23:28	0°♂			greatest brilliancy	-2139 Jan 06 j 00:18	28°♂57'32	-1.3m	
	-2145 Dec 09 j 17:37	0°♂			min. Earth dist.	-2139 Jan 07 j 16:02	28°♂18'04	0.66911 AU	
desc. node	-2145 Dec 23 j 03:45	10°♂05'19			direct	-2139 Feb 15 j 19:30	19°♂06'25		
	-2144 Jan 18 j 08:39	0°♂				-2139 Apr 04 j 02:52	0°♂		
	-2144 Feb 26 j 13:17	0°♂				-2139 Jun 01 j 21:49	0°♂		
	-2144 Apr 06 j 06:41	0°♂				-2139 Jul 19 j 01:55	0°♂		
	-2144 May 17 j 23:00	0°♂			desc. node	-2139 Aug 13 j 23:33	17°♂58'54		
	-2144 Jul 03 j 14:53	0°♄				-2139 Aug 30 j 14:51	0°♂		
retrograde	-2144 Sep 18 j 05:45	27°♄41'41				-2139 Oct 09 j 11:21	0°♂		
min. Earth dist.	-2144 Oct 22 j 04:31	20°♄01'31	0.59186 AU			-2139 Nov 16 j 21:44	0°♂		
asc. node	-2144 Oct 26 j 20:57	18°♄10'12			evening set	-2139 Dec 16 j 06:10	23°♄08'03		
opposition	-2144 Oct 27 j 17:19	17°♄50'02	0°02'11		greatest brilliancy	-2139 Dec 18 j 08:12	24°♄46'26	1.2m	
greatest brilliancy	-2143 Feb 21 j 08:29	4°♂43'56	-2.8m			-2139 Dec 24 j 23:55	0°♂		
direct	-2144 Dec 03 j 19:25	9°♄15'27				-2138 Feb 01 j 17:08	0°♂		
	-2143 Feb 11 j 15:29	0°♂							
	-2143 Apr 09 j 04:00	0°♂			conjunction	-2138 Feb 20 j 00:26	13°♂50'26	0°-59'-56	
	-2143 May 29 j 12:48	0°♂			minimum elong	-2138 Feb 20 j 02:39	13°♂54'37	0°59'58	
	-2143 Jul 15 j 14:24	0°♂				-2138 Mar 13 j 20:40	0°♂		
evening set	-2143 Aug 21 j 19:00	25°♂03'49			max. Earth dist.	-2138 Apr 07 j 19:05	17°♂56'26	2.47218 AU	
	-2143 Aug 28 j 21:47	0°♂			morning rise	-2138 Apr 23 j 03:26	28°♂42'48		
max. Earth dist.	-2143 Sep 06 j 03:10	5°♂45'48	2.49504 AU			-2138 Apr 24 j 23:54	0°♄		
	-2143 Oct 09 j 19:34	0°♂				-2138 Jun 08 j 10:09	0°♂		
					asc. node	-2138 Jun 18 j 18:35	6°♂45'58		
conjunction	-2143 Oct 12 j 03:48	1°♂43'20	0°18'31			-2138 Jul 25 j 08:06	0°♂		
minimum elong	-2143 Oct 12 j 04:47	1°♂45'10	0°18'31			-2138 Sep 13 j 14:00	0°♂		
desc. node	-2143 Nov 09 j 02:17	22°♂35'25				-2138 Nov 11 j 11:59	0°♂		
	-2143 Nov 18 j 20:10	0°♂			retrograde	-2137 Jan 04 j 09:18	13°♂26'38		
morning rise	-2143 Dec 07 j 21:25	14°♂38'35			opposition	-2137 Feb 11 j 04:55	4°♂56'52	4°45'00	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 27

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

greatest brilliancy	-2137 Feb 12 j 10:38	4°02'28"22	-1.5m			-2132 Apr 10 j 20:03	0°08'	
min. Earth dist.	-2137 Feb 16 j 23:27	2°04'41"18	0.61137 AU	evening set		-2132 May 20 j 16:13	25°08'22"57	
	-2137 Feb 24 j 14:04	30°08'00"				-2132 May 27 j 22:43	0°02'	
direct	-2137 Mar 24 j 03:17	25°03'04"22		max. Earth dist.		-2132 Jul 01 j 01:47	21°02'42"22	2.67110 AU
	-2137 Apr 22 j 14:36	0°02'						
	-2137 Jun 23 j 16:10	0°07'		conjunction		-2132 Jul 06 j 11:52	25°02'09"55	1°05'20"
desc. node	-2137 Jul 01 j 22:54	5°07'06"23		minimum elong		-2132 Jul 06 j 11:00	25°02'08"32	1°05'23"
	-2137 Aug 08 j 04:12	0°01'				-2132 Jul 14 j 01:18	0°00'	
	-2137 Sep 18 j 02:25	0°03'		morning rise		-2132 Aug 20 j 09:49	24°03'04"53	
	-2137 Oct 27 j 01:51	0°07'				-2132 Aug 29 j 11:55	0°02'	
	-2137 Dec 04 j 14:07	0°00'				-2132 Oct 13 j 21:08	0°07'	
	-2136 Jan 12 j 17:46	0°00'				-2132 Nov 27 j 04:04	0°01'	
evening set	-2136 Feb 19 j 21:19	28°00'13"14				-2131 Jan 09 j 13:36	0°03'	
	-2136 Feb 22 j 08:21	0°00'		desc. node		-2131 Feb 20 j 21:36	29°03'31"54	
	-2136 Apr 04 j 21:12	0°00'				-2131 Feb 21 j 13:45	0°07'	
						-2131 Apr 06 j 11:28	0°00'	
conjunction	-2136 Apr 16 j 19:29	8°00'09"40	0°-11'-8"			-2131 May 26 j 11:03	0°00'	
minimum elong	-2136 Apr 16 j 20:04	8°00'10"40	0°11'09"	retrograde		-2131 Jul 15 j 16:12	14°00'43"37	
behind sun begin	-2136 Apr 16 j 03:48	7°00'43"02		min. Earth dist.		-2131 Aug 11 j 11:58	9°00'56"39	0.42383 AU
behind sun end	-2136 Apr 17 j 12:20	8°00'38"17		greatest brilliancy		-2131 Aug 17 j 05:06	8°00'07"22	-2.5m
asc. node	-2136 May 05 j 16:24	20°00'52"31		opposition		-2131 Aug 19 j 02:46	7°00'30"36	-5°-55'-57"
max. Earth dist.	-2136 May 13 j 03:33	25°00'50"22	2.58896 AU	direct		-2131 Sep 19 j 09:55	1°00'33"31	
	-2136 May 19 j 10:35	0°00'				-2131 Dec 09 j 15:48	0°00'	
morning rise	-2136 Jun 07 j 21:03	12°00'42"44		asc. node		-2131 Dec 26 j 12:36	9°00'19"50	
	-2136 Jul 04 j 18:38	0°02'				-2130 Jan 30 j 22:29	0°00'	
	-2136 Aug 21 j 15:02	0°00'				-2130 Mar 21 j 11:43	0°00'	
	-2136 Oct 10 j 07:24	0°02'				-2130 May 09 j 03:08	0°02'	
	-2136 Dec 03 j 09:38	0°07'				-2130 Jun 25 j 19:35	0°00'	
retrograde	-2135 Feb 21 j 00:37	25°00'42"59		evening set		-2130 Jun 27 j 17:31	1°00'13"15	
opposition	-2135 Mar 27 j 17:38	18°00'43"19	2°45'04"	max. Earth dist.		-2130 Jul 25 j 05:19	18°00'56"27	2.63128 AU
greatest brilliancy	-2135 Mar 29 j 01:18	18°00'15"55	-2.1m			-2130 Aug 11 j 02:09	0°02'	
min. Earth dist.	-2135 Apr 05 j 05:46	15°00'47"45	0.49607 AU					
direct	-2135 May 04 j 21:59	10°00'09"06		conjunction		-2130 Aug 13 j 01:52	1°00'18"50	1°08'15"
desc. node	-2135 May 18 j 21:25	11°00'26"16		minimum elong		-2130 Aug 13 j 02:29	1°00'19"51	1°08'18"
	-2135 Jul 05 j 04:33	0°01'				-2130 Sep 24 j 14:49	0°07'	
	-2135 Aug 21 j 14:48	0°03'		morning rise		-2130 Sep 28 j 07:59	2°00'33"33	
	-2135 Oct 02 j 02:28	0°07'				-2130 Nov 06 j 09:11	0°01'	
	-2135 Nov 11 j 04:02	0°00'				-2130 Dec 17 j 14:50	0°03'	
	-2135 Dec 21 j 13:24	0°00'		desc. node		-2129 Jan 08 j 20:15	16°00'31"45	
	-2134 Feb 01 j 05:45	0°00'				-2129 Jan 26 j 18:46	0°07'	
	-2134 Mar 16 j 15:53	0°00'				-2129 Mar 07 j 13:13	0°00'	
asc. node	-2134 Mar 23 j 15:00	4°00'41"50				-2129 Apr 17 j 00:14	0°00'	
evening set	-2134 Apr 10 j 08:49	16°00'32"36				-2129 May 30 j 04:28	0°00'	
	-2134 Apr 30 j 19:37	0°00'				-2129 Jul 22 j 01:27	0°00'	
				retrograde		-2129 Sep 03 j 13:00	11°00'00"15	
conjunction	-2134 May 30 j 10:54	19°00'12"41	0°36'52"	min. Earth dist.		-2129 Oct 05 j 11:33	4°00'04"22	0.54924 AU
minimum elong	-2134 May 30 j 09:40	19°00'10"42	0°36'54"	opposition		-2129 Oct 12 j 06:57	1°00'26"28	-1°-27'-30"
max. Earth dist.	-2134 Jun 08 j 06:24	24°00'52"27	2.65709 AU	greatest brilliancy		-2129 Oct 11 j 18:30	1°00'38"30	-1.9m
	-2134 Jun 16 j 06:27	0°02'				-2129 Oct 16 j 01:59	30°00'08"05	
morning rise	-2134 Jul 16 j 05:14	19°00'05"37		asc. node		-2129 Nov 13 j 11:55	23°00'30"05	
	-2134 Aug 02 j 09:16	0°00'		direct		-2129 Nov 16 j 22:59	23°00'25"22	
	-2134 Sep 18 j 16:25	0°02'				-2129 Dec 22 j 02:01	0°00'	
	-2134 Nov 05 j 03:09	0°07'				-2128 Feb 25 j 00:47	0°00'	
	-2134 Dec 23 j 10:45	0°01'				-2128 Apr 17 j 17:36	0°02'	
	-2133 Feb 13 j 03:39	0°03'				-2128 Jun 05 j 23:22	0°00'	
desc. node	-2133 Apr 05 j 21:04	22°00'48"56				-2128 Jul 22 j 16:15	0°02'	
retrograde	-2133 May 03 j 03:47	27°00'06"30		evening set		-2128 Aug 05 j 00:49	8°00'52"59	
opposition	-2133 Jun 02 j 15:48	22°00'02"21	-3°-55'-12"	max. Earth dist.		-2128 Aug 22 j 11:28	20°00'41"50	2.54135 AU
greatest brilliancy	-2133 Jun 03 j 04:37	21°00'53"39	-2.8m			-2128 Sep 04 j 22:57	0°07'	
min. Earth dist.	-2133 Jun 05 j 20:50	21°00'10"12	0.38363 AU					
direct	-2133 Jul 03 j 20:59	16°00'35"49		conjunction		-2128 Sep 23 j 02:47	12°00'46"21	0°39'24"
	-2133 Aug 21 j 09:13	0°07'		minimum elong		-2128 Sep 23 j 04:19	12°00'49"05	0°39'23"
	-2133 Oct 12 j 00:13	0°00'				-2128 Oct 17 j 00:24	0°01'	
	-2133 Nov 26 j 07:26	0°00'		morning rise		-2128 Nov 14 j 12:06	21°00'06"45	
	-2132 Jan 09 j 23:34	0°00'		desc. node		-2128 Nov 25 j 19:00	29°00'37"59	
asc. node	-2132 Feb 08 j 13:45	19°00'37"27				-2128 Nov 26 j 06:36	0°03'	
	-2132 Feb 24 j 09:30	0°00'				-2127 Jan 04 j 08:26	0°07'	

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2127 Feb 11 j 23:54	0°☾				-2122 Sep 26 j 12:20	0°♌		
	-2127 Mar 23 j 02:10	0°♊				-2122 Nov 04 j 04:36	0°♏		
	-2127 May 02 j 16:50	0°♋				-2122 Dec 12 j 11:25	0°♐		
	-2127 Jun 15 j 07:47	0°♌				-2121 Jan 20 j 09:29	0°♊		
	-2127 Aug 04 j 17:21	0°♍		evening set		-2121 Jan 27 j 00:39	5°♊01'02		
asc. node	-2127 Sep 30 j 11:37	20°♋36'29				-2121 Mar 01 j 18:13	0°♋		
retrograde	-2127 Oct 10 j 19:45	21°♌17'58							
min. Earth dist.	-2127 Nov 16 j 12:17	12°♌40'58	0.64171 AU	conjunction		-2121 Mar 28 j 16:50	19°♋16'26	0°-32'-16	
opposition	-2127 Nov 19 j 20:30	11°♌20'25	1°55'56	minimum elong		-2121 Mar 28 j 18:38	19°♋19'36	0°32'16	
greatest brilliancy	-2127 Nov 19 j 11:37	11°♌29'20	-1.4m			-2121 Apr 13 j 01:43	0°♌		
direct	-2127 Dec 28 j 17:56	2°♌07'17		max. Earth dist.		-2121 May 02 j 02:08	13°♌00'56	2.54804 AU	
	-2126 Mar 23 j 13:31	0°♍		morning rise		-2121 May 23 j 03:08	27°♌06'51		
	-2126 May 16 j 08:36	0°♎		asc. node		-2121 May 23 j 09:22	27°♌17'11		
	-2126 Jul 03 j 12:03	0°♏				-2121 May 27 j 11:53	0°♍		
	-2126 Aug 17 j 02:24	0°♐				-2121 Jul 12 j 22:10	0°♍		
evening set	-2126 Sep 20 j 02:28	24°♐14'40				-2121 Aug 30 j 09:04	0°♎		
	-2126 Sep 27 j 22:48	0°♑				-2121 Oct 21 j 00:04	0°♏		
max. Earth dist.	-2126 Oct 08 j 18:15	8°♑01'17	2.41784 AU			-2121 Dec 23 j 06:11	0°♐		
desc. node	-2126 Oct 13 j 18:27	11°♑46'17		retrograde		-2120 Feb 01 j 03:35	8°♐00'27		
	-2126 Nov 06 j 18:05	0°♒		opposition		-2120 Mar 08 j 07:03	0°♐19'29	3°56'09	
						-2120 Mar 09 j 04:24	30°♒♏		
conjunction	-2126 Nov 15 j 22:08	7°♒04'11	0°-22'-26	greatest brilliancy		-2120 Mar 09 j 20:06	29°♒45'38	-1.8m	
minimum elong	-2126 Nov 15 j 20:32	7°♒01'05	0°22'27	min. Earth dist.		-2120 Mar 16 j 01:36	27°♒29'52	0.54646 AU	
	-2126 Dec 15 j 07:30	0°♓		direct		-2120 Apr 16 j 23:51	21°♒01'17		
morning rise	-2125 Jan 20 j 00:50	28°♓04'37				-2120 May 26 j 18:15	0°♓		
	-2125 Jan 22 j 11:42	0°♐		desc. node		-2120 Jun 04 j 14:16	3°♓50'55		
	-2125 Mar 02 j 03:53	0°♑				-2120 Jul 20 j 15:56	0°♑		
	-2125 Apr 11 j 05:01	0°♋				-2120 Sep 01 j 20:50	0°♒		
	-2125 May 23 j 11:15	0°♌				-2120 Oct 11 j 21:11	0°♓		
	-2125 Jul 07 j 23:49	0°♍				-2120 Nov 20 j 02:13	0°♐		
asc. node	-2125 Aug 18 j 10:08	24°♋34'47				-2120 Dec 29 j 19:58	0°♊		
	-2125 Aug 28 j 11:30	0°♍				-2119 Feb 08 j 23:18	0°♋		
retrograde	-2125 Nov 14 j 13:47	25°♍41'12		evening set		-2119 Mar 23 j 04:36	29°♋28'41		
opposition	-2125 Dec 24 j 10:39	16°♍03'47	3°58'50			-2119 Mar 23 j 22:57	0°♌		
greatest brilliancy	-2125 Dec 24 j 10:45	16°♍03'41	-1.2m	asc. node		-2119 Apr 09 j 07:15	11°♌04'11		
min. Earth dist.	-2125 Dec 24 j 21:38	15°♍52'48	0.67410 AU			-2119 May 07 j 19:18	0°♍		
direct	-2124 Feb 03 j 05:02	6°♍12'40							
	-2124 Apr 19 j 05:04	0°♎		conjunction		-2119 May 14 j 11:02	4°♍21'40	0°20'05	
	-2124 Jun 11 j 04:47	0°♏		minimum elong		-2119 May 14 j 10:12	4°♍20'18	0°20'06	
	-2124 Jul 27 j 04:24	0°♐		max. Earth dist.		-2119 May 29 j 14:01	14°♍12'06	2.63676 AU	
desc. node	-2124 Aug 30 j 17:08	24°♐23'50				-2119 Jun 23 j 03:14	0°♍		
	-2124 Sep 07 j 08:59	0°♑		morning rise		-2119 Jul 01 j 19:54	5°♍33'06		
	-2124 Oct 17 j 03:10	0°♒				-2119 Aug 09 j 10:07	0°♎		
evening set	-2124 Nov 18 j 15:23	25°♒21'30				-2119 Sep 26 j 08:44	0°♏		
	-2124 Nov 24 j 12:52	0°♓				-2119 Nov 14 j 09:15	0°♐		
	-2123 Jan 01 j 14:08	0°♐				-2118 Jan 05 j 17:07	0°♑		
						-2118 Mar 31 j 07:17	0°♒		
conjunction	-2123 Jan 23 j 21:49	17°♐25'47	-1°-6'-25	retrograde		-2118 Apr 02 j 06:36	0°♒01'27		
minimum elong	-2123 Jan 23 j 21:47	17°♐25'43	1°06'28			-2118 Apr 04 j 05:38	30°♒♑		
	-2123 Feb 09 j 05:22	0°♓		desc. node		-2118 Apr 22 j 13:52	27°♒29'48		
max. Earth dist.	-2123 Mar 14 j 15:40	25°♓08'38	2.41883 AU	opposition		-2118 May 04 j 03:16	24°♒18'48	0°-45'-15	
	-2123 Mar 21 j 06:11	0°♋		greatest brilliancy		-2118 May 04 j 10:32	24°♒13'19	-2.6m	
morning rise	-2123 Mar 31 j 12:32	7°♋28'16		min. Earth dist.		-2118 May 11 j 03:57	22°♒11'59	0.41781 AU	
	-2123 May 02 j 07:23	0°♌		direct		-2118 Jun 07 j 10:45	17°♒35'15		
	-2123 Jun 15 j 19:18	0°♍				-2118 Jul 23 j 06:33	0°♎		
asc. node	-2123 Jul 05 j 09:34	12°♍38'52				-2118 Sep 12 j 01:29	0°♓		
	-2123 Aug 02 j 06:13	0°♍				-2118 Oct 25 j 10:39	0°♐		
	-2123 Sep 23 j 14:36	0°♎				-2118 Dec 06 j 18:54	0°♊		
retrograde	-2123 Dec 19 j 18:45	29°♎34'15				-2117 Jan 18 j 19:52	0°♋		
opposition	-2122 Jan 27 j 09:52	20°♎40'25	4°49'15	asc. node		-2117 Feb 25 j 05:18	25°♋19'49		
greatest brilliancy	-2122 Jan 28 j 07:07	20°♎19'40	-1.4m			-2117 Mar 04 j 05:29	0°♌		
min. Earth dist.	-2122 Jan 31 j 17:23	18°♎59'29	0.64158 AU			-2117 Apr 19 j 00:56	0°♍		
direct	-2122 Mar 09 j 15:28	10°♎40'13		evening set		-2117 May 06 j 06:20	11°♎05'54		
	-2122 May 13 j 12:54	0°♏				-2117 Jun 04 j 19:34	0°♍		
	-2122 Jul 04 j 08:07	0°♐							
desc. node	-2122 Jul 18 j 15:12	9°♐24'51		conjunction		-2117 Jun 22 j 23:50	11°♍35'05	0°57'02	
	-2122 Aug 17 j 04:07	0°♑		minimum elong		-2117 Jun 22 j 22:38	11°♍33'10	0°57'04	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 29

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

max. Earth dist.	-2117 Jun 22 j 22:56	11° II 33'39	2.67218 AU	min. Earth dist.	-2112 Oct 31 j 16:20	28° Y 54'17	0.61202 AU
	-2117 Jul 21 j 20:46	0° S		opposition	-2112 Nov 05 j 11:23	26° Y 59'36	0°47'55
morning rise	-2117 Aug 07 j 06:29	10° S 30'06		greatest brilliancy	-2112 Nov 05 j 05:56	27° Y 05'02	-1.6m
	-2117 Sep 06 j 12:58	0° Ω		direct	-2112 Dec 13 j 06:41	18° Y 09'36	
	-2117 Oct 22 j 12:33	0° M			-2111 Feb 01 j 04:14	0° R	
	-2117 Dec 06 j 21:06	0° A			-2111 Apr 03 j 01:12	0° II	
	-2116 Jan 21 j 00:10	0° M			-2111 May 24 j 10:01	0° S	
	-2116 Mar 06 j 23:41	0° A			-2111 Jul 10 j 20:11	0° Ω	
desc. node	-2116 Mar 09 j 13:35	1° A 38'08			-2111 Aug 24 j 06:14	0° M	
	-2116 Apr 27 j 07:51	0° S		evening set	-2111 Aug 31 j 22:23	5° M 22'18	
retrograde	-2116 Jun 19 j 17:40	15° S 49'05		max. Earth dist.	-2111 Sep 16 j 00:50	16° M 06'20	2.46765 AU
min. Earth dist.	-2116 Jul 16 j 19:35	11° S 23'01	0.38731 AU		-2111 Oct 05 j 03:53	0° A	
greatest brilliancy	-2116 Jul 20 j 08:06	10° S 23'14	-2.8m				
opposition	-2116 Jul 21 j 16:35	10° S 00'11	-6°-44'-35	conjunction	-2111 Oct 23 j 22:48	13° A 57'25	0°04'27
direct	-2116 Aug 20 j 12:50	4° S 51'08		minimum elong	-2111 Oct 23 j 23:05	13° A 57'56	0°04'26
	-2116 Nov 02 j 00:16	0° \approx		behind sun begin	-2111 Oct 23 j 00:06	13° A 14'51	
	-2116 Dec 23 j 04:21	0° H		behind sun end	-2111 Oct 24 j 22:05	14° A 41'04	
asc. node	-2115 Jan 12 j 04:27	12° H 21'37		desc. node	-2111 Oct 30 j 10:53	18° A 51'05	
	-2115 Feb 09 j 10:47	0° Y			-2111 Nov 14 j 02:50	0° M	
	-2115 Mar 29 j 09:20	0° R		morning rise	-2111 Dec 22 j 13:57	29° M 47'33	
	-2115 May 16 j 06:45	0° II			-2111 Dec 22 j 20:20	0° A	
evening set	-2115 Jun 13 j 00:34	17° II 29'49			-2110 Jan 30 j 04:01	0° S	
	-2115 Jul 02 j 16:13	0° S		greatest brilliancy	-2110 Feb 12 j 15:17	10° S 29'47	1.2m
max. Earth dist.	-2115 Jul 15 j 13:04	8° S 15'18	2.65332 AU		-2110 Mar 09 j 22:47	0° \approx	
					-2110 Apr 19 j 02:34	0° H	
conjunction	-2115 Jul 29 j 05:12	17° S 05'32	1°10'31		-2110 May 31 j 15:36	0° Y	
minimum elong	-2115 Jul 29 j 05:11	17° S 05'31	1°10'34		-2110 Jul 17 j 03:33	0° R	
	-2115 Aug 17 j 23:10	0° Ω		asc. node	-2110 Sep 04 j 02:10	26° R 41'37	
morning rise	-2115 Sep 12 j 12:07	16° Ω 58'26			-2110 Sep 11 j 10:17	0° II	
	-2115 Oct 01 j 18:14	0° M		retrograde	-2110 Nov 01 j 03:58	12° II 49'02	
	-2115 Nov 13 j 23:55	0° A		min. Earth dist.	-2110 Dec 10 j 04:27	3° II 25'53	0.66891 AU
	-2115 Dec 25 j 20:42	0° M		opposition	-2110 Dec 11 j 05:37	3° II 00'37	3°19'49
desc. node	-2114 Jan 25 j 13:59	22° M 29'19		greatest brilliancy	-2110 Dec 10 j 23:58	3° II 06'17	-1.3m
	-2114 Feb 04 j 18:23	0° A			-2110 Dec 18 j 21:40	30° R R	
	-2114 Mar 17 j 10:10	0° S		direct	-2109 Jan 20 j 10:18	23° R 21'08	
	-2114 Apr 28 j 06:00	0° \approx			-2109 Feb 25 j 12:37	0° II	
	-2114 Jun 14 j 01:56	0° H			-2109 May 01 j 07:06	0° S	
retrograde	-2114 Aug 17 j 04:24	21° H 59'16			-2109 Jun 20 j 14:49	0° Ω	
min. Earth dist.	-2114 Sep 15 j 23:42	15° H 53'04	0.50076 AU		-2109 Aug 04 j 21:18	0° M	
opposition	-2114 Sep 23 j 18:05	13° H 00'53	-3°-10'-41		-2109 Sep 15 j 21:10	0° A	
greatest brilliancy	-2114 Sep 22 j 13:14	13° H 27'37	-2.1m	desc. node	-2109 Sep 17 j 09:35	1° A 07'09	
direct	-2114 Oct 27 j 19:03	5° H 41'32		evening set	-2109 Oct 25 j 00:12	29° A 31'44	
asc. node	-2114 Nov 30 j 03:09	11° H 48'37			-2109 Oct 25 j 14:52	0° M	
	-2113 Jan 11 j 07:10	0° Y			-2109 Dec 03 j 01:09	0° A	
	-2113 Mar 07 j 02:29	0° R					
	-2113 Apr 26 j 16:11	0° II		conjunction	-2109 Dec 27 j 14:07	19° A 21'14	0°-58'-25
	-2113 Jun 14 j 03:39	0° S		minimum elong	-2109 Dec 27 j 11:26	19° A 15'57	0°58'27
evening set	-2113 Jul 21 j 07:16	23° S 52'19			-2108 Jan 10 j 02:45	0° S	
	-2113 Jul 30 j 15:03	0° Ω		max. Earth dist.	-2108 Jan 20 j 19:32	8° S 23'08	2.37676 AU
max. Earth dist.	-2113 Aug 11 j 03:55	7° Ω 40'01	2.58232 AU		-2108 Feb 17 j 17:26	0° \approx	
				morning rise	-2108 Mar 05 j 13:31	12° \approx 47'25	
conjunction	-2113 Sep 06 j 19:37	25° Ω 44'57	0°54'48		-2108 Mar 28 j 17:04	0° H	
minimum elong	-2113 Sep 06 j 21:02	25° Ω 47'24	0°54'49		-2108 May 09 j 18:10	0° Y	
	-2113 Sep 12 j 23:17	0° M			-2108 Jun 23 j 11:01	0° R	
	-2113 Oct 25 j 06:24	0° A		asc. node	-2108 Jul 22 j 01:38	18° R 05'42	
morning rise	-2113 Oct 26 j 00:17	0° A 32'25			-2108 Aug 10 j 19:40	0° II	
	-2113 Dec 04 j 20:26	0° M			-2108 Oct 06 j 04:54	0° S	
desc. node	-2113 Dec 13 j 12:52	6° M 33'06		retrograde	-2108 Dec 05 j 05:29	16° S 20'56	
	-2112 Jan 13 j 06:26	0° A		opposition	-2107 Jan 13 j 11:25	7° S 07'18	4°38'56
	-2112 Feb 21 j 05:36	0° S		greatest brilliancy	-2107 Jan 13 j 23:44	6° S 55'08	-1.3m
	-2112 Mar 31 j 15:45	0° \approx		min. Earth dist.	-2107 Jan 16 j 06:41	6° S 00'53	0.66207 AU
	-2112 May 11 j 18:54	0° H			-2107 Feb 02 j 14:53	30° R II	
	-2112 Jun 25 j 19:55	0° Y		direct	-2107 Feb 23 j 17:20	27° II 06'40	
	-2112 Aug 23 j 05:35	0° R			-2107 Mar 18 j 09:27	0° S	
retrograde	-2112 Sep 26 j 16:55	6° R 55'47			-2107 May 26 j 04:21	0° Ω	
asc. node	-2112 Oct 17 j 02:02	4° R 00'58			-2107 Jul 13 j 13:54	0° M	
	-2112 Oct 28 j 21:10	30° R Y		desc. node	-2107 Aug 04 j 08:24	14° M 52'26	

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2107 Aug 25 j 12:39	0°♄				-2102 Jun 11 j 15:36	0°♂		
	-2107 Oct 04 j 13:05	0°♌		max. Earth dist.		-2102 Jun 13 j 17:07	1°♂19'09	2.66487 AU	
	-2107 Nov 12 j 01:11	0°♏		morning rise		-2102 Jul 24 j 07:00	27°♂11'05		
	-2107 Dec 20 j 04:26	0°♎				-2102 Jul 28 j 17:09	0°♎		
evening set	-2107 Dec 31 j 18:06	9°♎02'23				-2102 Sep 13 j 17:56	0°♏		
	-2106 Jan 27 j 22:26	0°♏				-2102 Oct 30 j 13:58	0°♐		
						-2102 Dec 16 j 13:39	0°♄		
conjunction	-2106 Mar 06 j 01:47	27°♏46'51	0°-51'-27			-2101 Feb 02 j 21:07	0°♌		
minimum elong	-2106 Mar 06 j 04:18	27°♏51'28	0°51'29	desc. node		-2101 Mar 27 j 07:04	28°♌59'00		
	-2106 Mar 09 j 02:36	0°♏				-2101 Mar 29 j 10:41	0°♏		
max. Earth dist.	-2106 Apr 17 j 19:02	28°♏17'16	2.50059 AU	retrograde		-2101 May 21 j 09:29	14°♏30'41		
	-2106 Apr 20 j 06:10	0°♐		opposition		-2101 Jun 20 j 16:16	9°♏29'13	-5°-30'-17	
morning rise	-2106 May 04 j 15:52	9°♐54'36		greatest brilliancy		-2101 Jun 20 j 16:46	9°♏28'53	-2.9m	
	-2106 Jun 03 j 14:55	0°♑		min. Earth dist.		-2101 Jun 20 j 23:44	9°♏24'16	0.37593 AU	
asc. node	-2106 Jun 09 j 00:19	3°♑32'38		direct		-2101 Jul 20 j 19:56	4°♏27'04		
	-2106 Jul 20 j 06:44	0°♑				-2101 Sep 30 j 22:35	0°♎		
	-2106 Sep 07 j 16:16	0°♎				-2101 Nov 18 j 18:26	0°♏		
	-2106 Nov 01 j 18:18	0°♏				-2100 Jan 03 j 20:49	0°♏		
retrograde	-2105 Jan 13 j 22:51	22°♏17'33		asc. node		-2100 Jan 29 j 18:47	16°♏53'10		
opposition	-2105 Feb 20 j 05:57	14°♏03'26	4°33'49			-2100 Feb 19 j 01:02	0°♐		
greatest brilliancy	-2105 Feb 21 j 15:26	13°♏31'46	-1.6m			-2100 Apr 05 j 21:53	0°♑		
min. Earth dist.	-2105 Feb 26 j 19:06	11°♏35'21	0.59040 AU			-2100 May 23 j 06:16	0°♑		
direct	-2105 Apr 01 j 20:59	4°♏19'46		evening set		-2100 May 29 j 07:06	3°♑49'17		
	-2105 Jun 15 j 14:05	0°♐		max. Earth dist.		-2100 Jul 06 j 09:51	28°♑03'06	2.66711 AU	
desc. node	-2105 Jun 22 j 06:19	3°♐50'44				-2100 Jul 09 j 10:58	0°♎		
	-2105 Aug 01 j 23:03	0°♄							
	-2105 Sep 12 j 11:59	0°♌		conjunction		-2100 Jul 14 j 18:21	3°♎24'00	1°08'25	
	-2105 Oct 21 j 18:29	0°♏		minimum elong		-2100 Jul 14 j 17:46	3°♎23'03	1°08'27	
	-2105 Nov 29 j 11:34	0°♎				-2100 Aug 24 j 20:00	0°♏		
	-2104 Jan 07 j 19:01	0°♏		morning rise		-2100 Aug 28 j 15:56	2°♏30'40		
	-2104 Feb 17 j 12:46	0°♏				-2100 Oct 08 j 23:50	0°♐		
evening set	-2104 Mar 03 j 04:53	10°♏28'54				-2100 Nov 21 j 20:42	0°♄		
	-2104 Mar 31 j 04:11	0°♐				-2099 Jan 03 j 15:03	0°♌		
asc. node	-2104 Apr 25 j 23:14	17°♐30'00		desc. node		-2099 Feb 11 j 06:12	27°♌32'42		
						-2099 Feb 14 j 16:36	0°♏		
conjunction	-2104 Apr 27 j 06:52	18°♐22'56	0°00'48			-2099 Mar 28 j 23:34	0°♎		
minimum elong	-2104 Apr 27 j 06:47	18°♐22'48	0°00'49			-2099 May 13 j 01:39	0°♏		
behind sun begin	-2104 Apr 26 j 09:04	17°♐46'29		retrograde		-2099 Jul 28 j 08:17	29°♏34'15		
behind sun end	-2104 Apr 28 j 04:30	18°♐59'05		min. Earth dist.		-2099 Aug 25 j 01:31	24°♏20'44	0.44989 AU	
	-2104 May 14 j 18:43	0°♑		greatest brilliancy		-2099 Aug 31 j 07:10	22°♏13'30	-2.4m	
max. Earth dist.	-2104 May 19 j 12:25	3°♑06'58	2.60814 AU	opposition		-2099 Sep 02 j 01:51	21°♏36'51	-5°00'-37	
morning rise	-2104 Jun 16 j 20:13	21°♑31'24		direct		-2099 Oct 04 j 08:53	15°♏08'52		
	-2104 Jun 30 j 01:36	0°♑				-2099 Nov 28 j 02:02	0°♏		
	-2104 Aug 16 j 15:36	0°♎		asc. node		-2099 Dec 16 j 18:41	9°♏03'21		
	-2104 Oct 04 j 13:13	0°♏				-2098 Jan 24 j 02:19	0°♐		
	-2104 Nov 25 j 03:59	0°♐				-2098 Mar 15 j 23:42	0°♑		
	-2103 Jan 27 j 13:03	0°♄				-2098 May 04 j 04:53	0°♑		
retrograde	-2103 Mar 06 j 10:05	7°♄22'58				-2098 Jun 21 j 03:36	0°♎		
opposition	-2103 Apr 09 j 03:04	0°♄50'03	1°44'05	evening set		-2098 Jul 06 j 05:30	9°♎38'14		
greatest brilliancy	-2103 Apr 10 j 00:59	0°♄31'53	-2.3m	max. Earth dist.		-2098 Jul 31 j 03:52	25°♎49'43	2.61596 AU	
	-2103 Apr 11 j 15:19	30°♐				-2098 Aug 06 j 11:56	0°♏		
min. Earth dist.	-2103 Apr 17 j 14:52	28°♐01'48	0.46674 AU						
desc. node	-2103 May 09 j 06:17	23°♐09'34		conjunction		-2098 Aug 21 j 20:06	10°♏12'04	1°04'47	
direct	-2103 May 16 j 04:14	22°♐49'44		minimum elong		-2098 Aug 21 j 21:04	10°♏13'40	1°04'49	
	-2103 Jun 19 j 06:07	0°♄				-2098 Sep 19 j 23:18	0°♐		
	-2103 Aug 13 j 05:02	0°♌		morning rise		-2098 Oct 07 j 21:42	12°♐28'38		
	-2103 Sep 25 j 07:15	0°♏				-2098 Nov 01 j 13:33	0°♄		
	-2103 Nov 05 j 03:20	0°♎				-2098 Dec 12 j 13:20	0°♌		
	-2103 Dec 16 j 00:52	0°♏		desc. node		-2098 Dec 30 j 05:04	13°♌12'38		
	-2102 Jan 27 j 02:00	0°♏				-2097 Jan 21 j 10:00	0°♏		
	-2102 Mar 11 j 18:47	0°♐				-2097 Mar 01 j 20:12	0°♎		
asc. node	-2102 Mar 13 j 20:52	1°♐24'15				-2097 Apr 10 j 19:35	0°♏		
evening set	-2102 Apr 20 j 02:33	26°♐04'34				-2097 May 22 j 22:41	0°♏		
	-2102 Apr 26 j 02:49	0°♑				-2097 Jul 10 j 05:07	0°♐		
				retrograde		-2097 Sep 12 j 16:00	21°♐11'49		
conjunction	-2102 Jun 08 j 04:49	27°♑47'34	0°45'13	min. Earth dist.		-2097 Oct 15 j 17:54	13°♐51'07	0.57371 AU	
minimum elong	-2102 Jun 08 j 03:31	27°♑45'29	0°45'14	opposition		-2097 Oct 21 j 21:26	11°♐26'29	0°-33'-54	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 31

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

greatest brilliancy	-2097 Oct 21 j 16:57	11° Υ 30'53	-1.7m	conjunction	-2091 Feb 08 j 12:48	3° \approx 07'51	-1°-4'-15
asc. node	-2097 Nov 03 j 18:17	6° Υ 49'23		minimum elong	-2091 Feb 08 j 14:19	3° \approx 10'45	1°04'18
direct	-2097 Nov 27 j 09:24	3° Υ 05'56			-2091 Mar 16 j 11:32	0° H	
	-2096 Feb 17 j 11:12	0° B		max. Earth dist.	-2091 Mar 29 j 21:23	9° H 44'23	2.44839 AU
	-2096 Apr 12 j 03:27	0° II		morning rise	-2091 Apr 13 j 17:49	20° H 20'28	
	-2096 Jun 01 j 00:50	0° S			-2091 Apr 27 j 12:33	0° Υ	
	-2096 Jul 17 j 23:39	0° Ω			-2091 Jun 10 j 21:47	0° B	
evening set	-2096 Aug 14 j 10:51	18° Ω 22'48		asc. node	-2091 Jun 25 j 16:25	9° B 37'13	
max. Earth dist.	-2096 Aug 30 j 10:55	29° Ω 23'14	2.51649 AU		-2091 Jul 27 j 23:09	0° II	
	-2096 Aug 31 j 08:04	0° H			-2091 Sep 16 j 21:06	0° S	
					-2091 Nov 19 j 01:47	0° Ω	
conjunction	-2096 Oct 03 j 16:16	23° H 40'46	0°28'04	retrograde	-2091 Dec 28 j 12:27	7° Ω 50'28	
minimum elong	-2096 Oct 03 j 17:36	23° H 43'10	0°28'03		-2090 Feb 02 j 13:03	30° R S	
	-2096 Oct 12 j 08:36	0° A		opposition	-2090 Feb 04 j 17:55	29° S 09'12	4°48'23
desc. node	-2096 Nov 16 j 04:06	25° A 56'17		greatest brilliancy	-2090 Feb 05 j 19:55	28° S 44'03	-1.4m
	-2096 Nov 21 j 12:31	0° M		min. Earth dist.	-2090 Feb 09 j 21:13	27° S 10'15	0.62619 AU
morning rise	-2096 Nov 27 j 07:21	4° M 24'41		direct	-2090 Mar 17 j 21:11	19° S 12'16	
	-2096 Dec 30 j 11:10	0° J			-2090 May 02 j 16:11	0° Ω	
	-2095 Feb 06 j 23:17	0° Z			-2090 Jun 27 j 20:47	0° H	
	-2095 Mar 17 j 21:51	0° \approx		desc. node	-2090 Jul 09 j 00:37	7° H 06'23	
	-2095 Apr 27 j 06:38	0° H			-2090 Aug 11 j 14:35	0° A	
	-2095 Jun 09 j 08:15	0° Υ			-2090 Sep 21 j 07:01	0° M	
	-2095 Jul 27 j 16:21	0° B			-2090 Oct 30 j 03:06	0° J	
asc. node	-2095 Sep 20 j 17:17	25° B 03'58			-2090 Dec 07 j 12:23	0° Z	
retrograde	-2095 Oct 18 j 16:25	29° B 35'50			-2089 Jan 15 j 12:36	0° \approx	
min. Earth dist.	-2095 Nov 25 j 06:29	20° B 41'14	0.65409 AU	evening set	-2089 Feb 09 j 21:44	18° \approx 58'45	
opposition	-2095 Nov 27 j 19:14	19° B 40'12	2°30'07		-2089 Feb 24 j 23:14	0° H	
greatest brilliancy	-2095 Nov 27 j 10:28	19° B 49'00	-1.3m		-2089 Apr 08 j 08:23	0° Υ	
direct	-2094 Jan 06 j 05:36	10° B 16'21					
	-2094 Mar 15 j 10:38	0° II		conjunction	-2089 Apr 09 j 11:00	0° Υ 45'56	0°-20'-5
	-2094 May 10 j 16:23	0° S		minimum elong	-2089 Apr 09 j 12:06	0° Υ 47'49	0°20'05
	-2094 Jun 28 j 11:44	0° Ω		max. Earth dist.	-2089 May 09 j 08:20	21° Υ 03'56	2.57170 AU
	-2094 Aug 12 j 07:45	0° H		asc. node	-2089 May 13 j 14:08	23° Υ 53'48	
	-2094 Sep 23 j 05:42	0° A			-2089 May 22 j 18:57	0° B	
evening set	-2094 Oct 02 j 00:31	6° A 30'23		morning rise	-2089 Jun 01 j 21:41	6° B 38'54	
desc. node	-2094 Oct 04 j 02:18	8° A 03'11			-2089 Jul 08 j 02:48	0° II	
max. Earth dist.	-2094 Oct 29 j 04:43	27° A 03'12	2.39332 AU		-2089 Aug 25 j 03:51	0° S	
	-2094 Nov 02 j 00:50	0° M			-2089 Oct 14 j 12:19	0° Ω	
					-2089 Dec 10 j 04:21	0° H	
conjunction	-2094 Nov 30 j 06:05	21° M 55'07	0°-37'-27	retrograde	-2088 Feb 12 j 14:00	18° H 12'44	
minimum elong	-2094 Nov 30 j 03:28	21° M 50'01	0°37'29	opposition	-2088 Mar 18 j 23:42	10° H 53'33	3°19'53
	-2094 Dec 10 j 13:14	0° J		greatest brilliancy	-2088 Mar 20 j 11:06	10° H 22'06	-2.0m
	-2093 Jan 17 j 16:20	0° Z		min. Earth dist.	-2088 Mar 27 j 06:32	7° H 57'47	0.51927 AU
morning rise	-2093 Feb 05 j 16:48	14° Z 51'43		direct	-2088 Apr 26 j 23:08	1° H 56'57	
	-2093 Feb 25 j 07:29	0° \approx		desc. node	-2088 May 25 j 23:17	7° H 05'53	
	-2093 Apr 06 j 06:58	0° H			-2088 Jul 12 j 02:10	0° A	
	-2093 May 18 j 09:39	0° Υ			-2088 Aug 26 j 05:43	0° M	
	-2093 Jul 02 j 11:45	0° B			-2088 Oct 05 j 23:31	0° J	
asc. node	-2093 Aug 08 j 16:56	22° B 46'08			-2088 Nov 14 j 14:24	0° Z	
	-2093 Aug 21 j 09:36	0° II			-2088 Dec 24 j 15:19	0° \approx	
	-2093 Oct 28 j 11:34	0° S			-2087 Feb 04 j 00:07	0° H	
retrograde	-2093 Nov 22 j 08:14	3° S 27'44			-2087 Mar 19 j 04:04	0° Υ	
	-2093 Dec 15 j 08:41	30° R II		asc. node	-2087 Mar 30 j 12:33	7° Υ 41'02	
opposition	-2092 Jan 01 j 01:11	23° II 57'46	4°16'42	evening set	-2087 Apr 02 j 18:18	9° Υ 51'42	
greatest brilliancy	-2092 Jan 01 j 05:17	23° II 53'42	-1.2m		-2087 May 03 j 03:09	0° B	
min. Earth dist.	-2092 Jan 02 j 08:13	23° II 26'52	0.67261 AU				
direct	-2092 Feb 11 j 01:31	14° II 01'57		conjunction	-2087 May 23 j 18:01	13° B 25'50	0°30'11
	-2092 Apr 10 j 09:59	0° S		minimum elong	-2087 May 23 j 16:54	13° B 24'02	0°30'12
	-2092 Jun 05 j 07:41	0° Ω		max. Earth dist.	-2087 Jun 04 j 08:00	20° B 54'34	2.64904 AU
	-2092 Jul 22 j 00:16	0° H			-2087 Jun 18 j 11:55	0° II	
desc. node	-2092 Aug 21 j 01:11	21° H 00'12		morning rise	-2087 Jul 10 j 03:48	13° II 49'11	
	-2092 Sep 02 j 10:36	0° A			-2087 Aug 04 j 15:55	0° S	
	-2092 Oct 12 j 06:51	0° M			-2087 Sep 21 j 05:06	0° Ω	
	-2092 Nov 19 j 17:06	0° J			-2087 Nov 08 j 06:24	0° H	
evening set	-2092 Dec 04 j 03:26	11° J 22'50			-2087 Dec 27 j 23:03	0° A	
	-2092 Dec 27 j 18:39	0° Z			-2086 Feb 22 j 05:56	0° M	
	-2091 Feb 04 j 10:21	0° \approx		desc. node	-2086 Apr 12 j 22:46	14° M 54'39	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 32

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

retrograde	-2086 Apr 19 j 04:23	15° \mathbb{M} 09'04			-2081 Jun 09 j 08:23	0° \mathfrak{S}	
opposition	-2086 May 20 j 05:30	9° \mathbb{M} 51'14	-2°-31'-24		-2081 Jul 25 j 23:42	0° \mathcal{O}	
greatest brilliancy	-2086 May 20 j 20:46	9° \mathbb{M} 40'25	-2.7m	evening set	-2081 Jul 30 j 04:55	2° \mathcal{O} 47'15	
min. Earth dist.	-2086 May 25 j 10:49	8° \mathbb{M} 22'47	0.39615 AU	max. Earth dist.	-2081 Aug 17 j 23:44	15° \mathcal{O} 21'59	2.56039 AU
direct	-2086 Jun 21 j 17:41	3° \mathbb{M} 53'22			-2081 Sep 08 j 08:13	0° \mathfrak{M}	
	-2086 Sep 01 j 04:19	0° \mathfrak{A}					
	-2086 Oct 17 j 17:55	0° \mathfrak{Z}		conjunction	-2081 Sep 16 j 11:58	5° \mathfrak{M} 41'15	0°46'35
	-2086 Nov 30 j 10:40	0° \approx		minimum elong	-2081 Sep 16 j 13:31	5° \mathfrak{M} 43'58	0°46'35
	-2085 Jan 13 j 06:06	0° \mathfrak{H}			-2081 Oct 20 j 13:01	0° $\underline{\mathfrak{A}}$	
asc. node	-2085 Feb 15 j 11:34	22° \mathfrak{H} 17'32		morning rise	-2081 Nov 06 j 07:53	12° $\underline{\mathfrak{A}}$ 19'01	
	-2085 Feb 27 j 03:17	0° \mathcal{Y}			-2081 Nov 29 j 23:24	0° \mathbb{M}	
	-2085 Apr 14 j 05:43	0° \mathfrak{B}		desc. node	-2081 Dec 03 j 20:36	2° \mathbb{M} 56'13	
evening set	-2085 May 15 j 04:21	19° \mathfrak{B} 48'42			-2080 Jan 08 j 05:05	0° \mathfrak{A}	
	-2085 May 31 j 04:14	0° \mathbb{I}			-2080 Feb 15 j 23:42	0° \mathfrak{Z}	
max. Earth dist.	-2085 Jun 28 j 07:53	17° \mathbb{I} 55'14	2.67265 AU		-2080 Mar 26 j 04:41	0° \approx	
					-2080 May 05 j 22:43	0° \mathfrak{H}	
conjunction	-2085 Jul 01 j 08:22	19° \mathbb{I} 50'45	1°02'18		-2080 Jun 18 j 23:28	0° \mathcal{Y}	
minimum elong	-2085 Jul 01 j 07:20	19° \mathbb{I} 49'06	1°02'20		-2080 Aug 10 j 08:40	0° \mathfrak{B}	
	-2085 Jul 17 j 06:04	0° \mathfrak{S}		retrograde	-2080 Oct 04 j 21:08	15° \mathfrak{B} 43'41	
morning rise	-2085 Aug 15 j 08:46	18° \mathfrak{S} 42'02		asc. node	-2080 Oct 07 j 09:04	15° \mathfrak{B} 41'07	
	-2085 Sep 01 j 19:20	0° \mathcal{O}		min. Earth dist.	-2080 Nov 09 j 20:06	7° \mathfrak{B} 22'07	0.62959 AU
	-2085 Oct 17 j 11:09	0° \mathfrak{M}		opposition	-2080 Nov 13 j 20:10	5° \mathfrak{B} 45'58	1°29'02
	-2085 Dec 01 j 04:53	0° $\underline{\mathfrak{A}}$		greatest brilliancy	-2080 Nov 13 j 11:58	5° \mathfrak{B} 54'10	-1.5m
	-2084 Jan 14 j 06:55	0° \mathbb{M}			-2080 Nov 29 j 21:07	30° \mathfrak{R} \mathcal{Y}	
	-2084 Feb 27 j 07:59	0° \mathfrak{A}		direct	-2080 Dec 22 j 07:13	26° \mathcal{Y} 42'28	
desc. node	-2084 Feb 28 j 23:16	1° \mathfrak{A} 06'13			-2079 Jan 15 j 16:47	0° \mathfrak{B}	
	-2084 Apr 13 j 06:32	0° \mathfrak{Z}			-2079 Mar 27 j 10:22	0° \mathbb{I}	
	-2084 Jun 13 j 18:18	0° \approx			-2079 May 19 j 03:13	0° \mathfrak{S}	
retrograde	-2084 Jul 05 j 00:27	3° \approx 00'52			-2079 Jul 06 j 00:10	0° \mathcal{O}	
	-2084 Jul 26 j 03:24	30° \mathfrak{R} \mathfrak{Z}			-2079 Aug 19 j 14:04	0° \mathfrak{M}	
min. Earth dist.	-2084 Jul 31 j 13:00	28° \mathfrak{Z} 28'59	0.40509 AU	evening set	-2079 Sep 11 j 13:24	16° \mathfrak{M} 13'54	
greatest brilliancy	-2084 Aug 05 j 11:56	26° \mathfrak{Z} 59'28	-2.7m	max. Earth dist.	-2079 Sep 27 j 13:14	27° \mathfrak{M} 49'58	2.43979 AU
opposition	-2084 Aug 07 j 06:50	26° \mathfrak{Z} 26'52	-6°-28'-14		-2079 Sep 30 j 12:05	0° $\underline{\mathfrak{A}}$	
direct	-2084 Sep 06 j 19:40	20° \mathfrak{Z} 53'56		desc. node	-2079 Oct 20 j 20:14	15° $\underline{\mathfrak{A}}$ 08'07	
	-2084 Oct 17 j 08:45	0° \approx					
	-2084 Dec 15 j 06:14	0° \mathfrak{H}		conjunction	-2079 Nov 05 j 13:45	27° $\underline{\mathfrak{A}}$ 03'57	0°-10'-43
asc. node	-2083 Jan 02 j 10:27	10° \mathfrak{H} 40'11		minimum elong	-2079 Nov 05 j 13:01	27° $\underline{\mathfrak{A}}$ 02'33	0°10'45
	-2083 Feb 03 j 10:21	0° \mathcal{Y}		behind sun begin	-2079 Nov 04 j 18:01	26° $\underline{\mathfrak{A}}$ 26'19	
	-2083 Mar 24 j 04:27	0° \mathfrak{B}		behind sun end	-2079 Nov 06 j 08:00	27° $\underline{\mathfrak{A}}$ 38'49	
	-2083 May 11 j 11:28	0° \mathbb{I}			-2079 Nov 09 j 09:47	0° \mathbb{M}	
evening set	-2083 Jun 21 j 11:10	25° \mathbb{I} 48'43			-2079 Dec 18 j 01:13	0° \mathfrak{A}	
	-2083 Jun 28 j 01:02	0° \mathfrak{S}		morning rise	-2078 Jan 07 j 07:51	15° \mathfrak{A} 54'56	
max. Earth dist.	-2083 Jul 21 j 03:39	14° \mathfrak{S} 51'03	2.64210 AU		-2078 Jan 25 j 06:37	0° \mathfrak{Z}	
					-2078 Mar 04 j 23:15	0° \approx	
conjunction	-2083 Aug 06 j 16:29	25° \mathfrak{S} 37'17	1°09'45		-2078 Apr 14 j 00:13	0° \mathfrak{H}	
minimum elong	-2083 Aug 06 j 16:49	25° \mathfrak{S} 37'51	1°09'47		-2078 May 26 j 07:22	0° \mathcal{Y}	
	-2083 Aug 13 j 08:21	0° \mathcal{O}			-2078 Jul 11 j 02:10	0° \mathfrak{B}	
morning rise	-2083 Sep 21 j 10:24	26° \mathcal{O} 10'43		asc. node	-2078 Aug 25 j 07:54	26° \mathfrak{B} 07'08	
	-2083 Sep 27 j 00:44	0° \mathfrak{M}			-2078 Sep 01 j 22:12	0° \mathbb{I}	
	-2083 Nov 09 j 00:40	0° $\underline{\mathfrak{A}}$		retrograde	-2078 Nov 08 j 20:27	20° \mathbb{I} 41'04	
	-2083 Dec 20 j 13:28	0° \mathbb{M}		opposition	-2078 Dec 18 j 20:34	10° \mathbb{I} 58'20	3°43'47
desc. node	-2082 Jan 15 j 21:57	19° \mathbb{M} 28'03		greatest brilliancy	-2078 Dec 18 j 17:50	11° \mathbb{I} 01'03	-1.2m
	-2082 Jan 30 j 01:00	0° \mathfrak{A}		min. Earth dist.	-2078 Dec 18 j 15:26	11° \mathbb{I} 03'28	0.67312 AU
	-2082 Mar 11 j 03:41	0° \mathfrak{Z}		direct	-2077 Jan 28 j 10:09	1° \mathbb{I} 11'54	
	-2082 Apr 21 j 01:44	0° \approx			-2077 Apr 24 j 09:33	0° \mathfrak{S}	
	-2082 Jun 04 j 06:46	0° \mathfrak{H}			-2077 Jun 15 j 04:45	0° \mathcal{O}	
	-2082 Aug 04 j 00:51	0° \mathcal{Y}			-2077 Jul 30 j 22:22	0° \mathfrak{M}	
retrograde	-2082 Aug 27 j 07:06	3° \mathcal{Y} 34'07		desc. node	-2077 Sep 07 j 18:50	27° \mathfrak{M} 34'40	
	-2082 Sep 18 j 14:09	30° \mathfrak{R} \mathfrak{H}			-2077 Sep 11 j 02:05	0° $\underline{\mathfrak{A}}$	
min. Earth dist.	-2082 Sep 27 j 07:03	27° \mathfrak{H} 00'18	0.52802 AU		-2077 Oct 20 j 21:01	0° \mathbb{M}	
opposition	-2082 Oct 04 j 14:37	24° \mathfrak{H} 13'37	-2°-10'00	evening set	-2077 Nov 08 j 03:19	14° \mathbb{M} 10'25	
greatest brilliancy	-2082 Oct 03 j 19:17	24° \mathfrak{H} 31'59	-2.0m		-2077 Nov 28 j 07:17	0° \mathfrak{A}	
direct	-2082 Nov 08 j 13:51	16° \mathfrak{H} 30'11			-2076 Jan 05 j 08:22	0° \mathfrak{Z}	
asc. node	-2082 Nov 20 j 09:28	17° \mathfrak{H} 21'35					
	-2082 Dec 31 j 11:53	0° \mathcal{Y}		conjunction	-2076 Jan 12 j 13:41	5° \mathfrak{Z} 39'59	-1°-4'-48
	-2081 Feb 28 j 17:17	0° \mathfrak{B}		minimum elong	-2076 Jan 12 j 12:18	5° \mathfrak{Z} 37'16	1°04'51
	-2081 Apr 21 j 10:17	0° \mathbb{I}			-2076 Feb 12 j 22:36	0° \approx	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 33

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

max. Earth dist.	-2076 Feb 27 j 11:18	11° 30 03'26	2.39676 AU	greatest brilliancy	-2071 Apr 22 j 22:35	13° 56 56'59	-2.5m
morning rise	-2076 Mar 20 j 16:06	27° 37 37'31		desc. node	-2071 Apr 29 j 15:22	11° 49 49'58	
	-2076 Mar 23 j 21:35	0° 38		min. Earth dist.	-2071 Apr 30 j 15:00	11° 43 31'46	0.43878 AU
	-2076 May 04 j 21:03	0° 39		direct	-2071 May 28 j 08:08	6° 41 41'18	
	-2076 Jun 18 j 09:05	0° 38			-2071 Aug 02 j 15:24	0° 38	
asc. node	-2076 Jul 12 j 06:52	15° 38 19'59			-2071 Sep 17 j 18:07	0° 37	
	-2076 Aug 05 j 02:08	0° 38			-2071 Oct 29 j 18:09	0° 38	
	-2076 Sep 27 j 15:30	0° 38			-2071 Dec 10 j 07:54	0° 38	
retrograde	-2076 Dec 13 j 10:56	24° 38 19'24			-2070 Jan 21 j 20:06	0° 38	
opposition	-2075 Jan 21 j 09:45	15° 38 16'09	4°46'13	asc. node	-2070 Mar 04 j 02:42	28° 38 09'50	
greatest brilliancy	-2075 Jan 22 j 03:00	14° 38 59'14	-1.3m		-2070 Mar 06 j 20:29	0° 39	
min. Earth dist.	-2075 Jan 25 j 01:22	13° 38 50'17	0.65207 AU		-2070 Apr 21 j 09:38	0° 38	
direct	-2075 Mar 03 j 17:00	5° 38 15'00		evening set	-2070 Apr 29 j 11:29	5° 38 14'07	
	-2075 May 18 j 14:48	0° 38			-2070 Jun 07 j 01:02	0° 38	
	-2075 Jul 07 j 19:30	0° 38					
desc. node	-2075 Jul 25 j 16:48	11° 38 58'43		conjunction	-2070 Jun 16 j 18:10	6° 38 12'04	0°52'30
	-2075 Aug 20 j 06:50	0° 38		minimum elong	-2070 Jun 16 j 16:53	6° 38 10'02	0°52'32
	-2075 Sep 29 j 12:24	0° 38		max. Earth dist.	-2070 Jun 19 j 01:58	7° 38 41'05	2.66995 AU
	-2075 Nov 07 j 03:01	0° 37			-2070 Jul 24 j 02:01	0° 38	
	-2075 Dec 15 j 07:52	0° 38		morning rise	-2070 Aug 01 j 08:09	5° 38 16'10	
evening set	-2074 Jan 15 j 20:11	24° 38 25'31			-2070 Sep 08 j 21:54	0° 38	
	-2074 Jan 23 j 03:22	0° 38			-2070 Oct 25 j 05:57	0° 38	
	-2074 Mar 04 j 08:51	0° 38			-2070 Dec 10 j 05:46	0° 38	
					-2069 Jan 25 j 12:12	0° 38	
conjunction	-2074 Mar 19 j 05:55	10° 38 45'15	0°-40'-54		-2069 Mar 14 j 20:53	0° 37	
minimum elong	-2074 Mar 19 j 08:10	10° 38 49'16	0°40'54	desc. node	-2069 Mar 17 j 14:49	1° 37 36'24	
	-2074 Apr 15 j 13:08	0° 39			-2069 May 18 j 17:01	0° 38	
max. Earth dist.	-2074 Apr 26 j 08:58	7° 39 27'45	2.52752 AU	retrograde	-2069 Jun 07 j 21:58	2° 38 37'12	
morning rise	-2074 May 15 j 10:46	20° 39 23'36			-2069 Jun 28 j 12:15	30° 38	
	-2074 May 29 j 21:08	0° 38		min. Earth dist.	-2069 Jul 06 j 04:09	28° 37 02'06	0.37849 AU
asc. node	-2074 May 30 j 06:39	0° 38 15'43		opposition	-2069 Jul 08 j 22:39	27° 37 16'55	-6°-30'-1
	-2074 Jul 15 j 08:11	0° 38		greatest brilliancy	-2069 Jul 08 j 04:06	27° 37 29'32	-2.8m
	-2074 Sep 02 j 02:18	0° 38		direct	-2069 Aug 07 j 15:51	22° 37 18'16	
	-2074 Oct 24 j 20:12	0° 38			-2069 Sep 12 j 22:41	0° 38	
	-2073 Jan 07 j 21:05	0° 38			-2069 Nov 09 j 23:26	0° 38	
retrograde	-2073 Jan 24 j 00:33	1° 38 30'02			-2069 Dec 28 j 08:24	0° 38	
	-2073 Feb 08 j 10:03	30° 38 02		asc. node	-2068 Jan 20 j 01:57	14° 38 26'37	
opposition	-2073 Mar 01 j 17:46	23° 38 33'20	4°14'58		-2068 Feb 13 j 12:53	0° 39	
greatest brilliancy	-2073 Mar 03 j 05:51	22° 38 59'49	-1.7m		-2068 Mar 31 j 22:32	0° 38	
min. Earth dist.	-2073 Mar 09 j 00:38	20° 38 51'36	0.56713 AU		-2068 May 18 j 13:39	0° 38	
direct	-2073 Apr 10 j 22:41	14° 38 01'50		evening set	-2068 Jun 06 j 18:19	12° 38 07'27	
	-2073 Jun 05 j 13:51	0° 38			-2068 Jul 04 j 21:02	0° 38	
desc. node	-2073 Jun 12 j 15:39	3° 38 36'39		max. Earth dist.	-2068 Jul 11 j 18:48	4° 38 25'20	2.66053 AU
	-2073 Jul 26 j 06:01	0° 38					
	-2073 Sep 06 j 15:39	0° 38		conjunction	-2068 Jul 23 j 00:28	11° 38 38'58	1°10'08
	-2073 Oct 16 j 07:29	0° 37		minimum elong	-2068 Jul 23 j 00:12	11° 38 38'32	1°10'10
	-2073 Nov 24 j 06:15	0° 38			-2068 Aug 20 j 05:28	0° 38	
	-2072 Jan 02 j 18:19	0° 38		morning rise	-2068 Sep 06 j 01:43	11° 38 07'12	
	-2072 Feb 12 j 16:00	0° 38			-2068 Oct 04 j 04:59	0° 38	
evening set	-2072 Mar 14 j 19:52	21° 38 59'27			-2068 Nov 16 j 17:38	0° 38	
	-2072 Mar 26 j 10:34	0° 39			-2068 Dec 28 j 23:42	0° 38	
asc. node	-2072 Apr 16 j 04:48	14° 39 05'17		desc. node	-2067 Feb 01 j 15:08	25° 38 05'54	
					-2067 Feb 08 j 08:27	0° 37	
conjunction	-2072 May 07 j 06:36	28° 39 07'07	0°12'14		-2067 Mar 21 j 14:02	0° 38	
minimum elong	-2072 May 07 j 06:03	28° 39 06'12	0°12'15		-2067 May 03 j 09:37	0° 38	
behind sun begin	-2072 May 06 j 16:30	27° 39 43'51			-2067 Jun 22 j 18:44	0° 38	
behind sun end	-2072 May 07 j 19:35	28° 39 28'32		retrograde	-2067 Aug 08 j 23:20	13° 38 12'29	
	-2072 May 10 j 03:05	0° 38		min. Earth dist.	-2067 Sep 06 j 19:56	7° 38 30'03	0.47801 AU
max. Earth dist.	-2072 May 25 j 13:16	10° 38 05'58	2.62496 AU	greatest brilliancy	-2067 Sep 13 j 08:28	5° 38 09'54	-2.2m
morning rise	-2072 Jun 25 j 13:04	0° 38 05'39		opposition	-2067 Sep 14 j 20:17	4° 38 37'40	-3°-58'00
	-2072 Jun 25 j 09:32	0° 38			-2067 Sep 29 j 14:14	30° 38	
	-2072 Aug 11 j 18:31	0° 38		direct	-2067 Oct 18 j 02:10	27° 38 40'14	
	-2072 Sep 29 j 01:43	0° 38			-2067 Nov 06 j 18:40	0° 38	
	-2072 Nov 18 j 00:28	0° 38		asc. node	-2067 Dec 07 j 00:52	10° 38 11'50	
	-2071 Jan 12 j 08:02	0° 38			-2066 Jan 16 j 09:42	0° 39	
retrograde	-2071 Mar 21 j 00:49	20° 38 06'41			-2066 Mar 10 j 05:55	0° 38	
opposition	-2071 Apr 22 j 16:55	14° 38 01'27	0°25'49		-2066 Apr 29 j 04:36	0° 38	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 34

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2066 Jun 16 j 10:44	0°☿		minimum elong	-2062 Dec 15 j 06:20	7°☿28'06	0°50'36
evening set	-2066 Jul 14 j 19:07	18°☿09'25			-2061 Jan 12 j 20:47	0°☿	
	-2066 Aug 01 j 21:41	0°♂			-2061 Feb 20 j 10:59	0°≈	
max. Earth dist.	-2066 Aug 06 j 08:32	2°♂56'39	2.59837 AU	morning rise	-2061 Feb 22 j 05:25	1°≈21'14	
					-2061 Apr 01 j 09:28	0°♂	
conjunction	-2066 Aug 30 j 19:43	19°♂21'41	0°59'39		-2061 May 13 j 09:31	0°♀	
minimum elong	-2066 Aug 30 j 20:58	19°♂23'47	0°59'40		-2061 Jun 27 j 04:03	0°♂	
	-2066 Sep 15 j 08:23	0°♂		asc. node	-2061 Jul 29 j 23:25	20°♂31'44	
morning rise	-2066 Oct 17 j 22:50	22°♂54'47			-2061 Aug 14 j 23:30	0°♂	
	-2066 Oct 27 j 19:35	0°♂			-2061 Oct 13 j 03:14	0°☿	
	-2066 Dec 07 j 14:33	0°♂		retrograde	-2061 Nov 30 j 05:50	11°☿17'43	
desc. node	-2066 Dec 20 j 14:27	9°♂45'52		opposition	-2060 Jan 08 j 17:46	1°☿56'20	4°30'51
	-2065 Jan 16 j 05:29	0°♂		greatest brilliancy	-2060 Jan 09 j 02:17	1°☿47'53	-1.3m
	-2065 Feb 24 j 08:55	0°☿		min. Earth dist.	-2060 Jan 10 j 20:54	1°☿05'40	0.66809 AU
	-2065 Apr 04 j 23:28	0°≈			-2060 Jan 13 j 15:46	30°♂	
	-2065 May 16 j 09:35	0°♂		direct	-2060 Feb 18 j 22:32	21°♂57'17	
	-2065 Jul 01 j 08:12	0°♀			-2060 Mar 29 j 16:23	0°☿	
	-2065 Sep 10 j 04:44	0°♂			-2060 May 29 j 23:38	0°♂	
retrograde	-2065 Sep 21 j 10:12	0°♂50'42			-2060 Jul 16 j 15:49	0°♂	
	-2065 Oct 02 j 08:12	30°♂♀		desc. node	-2060 Aug 11 j 10:11	17°♂46'27	
asc. node	-2065 Oct 24 j 23:15	23°♀21'15			-2060 Aug 28 j 10:19	0°♂	
min. Earth dist.	-2065 Oct 25 j 13:48	23°♀07'00	0.59596 AU		-2060 Oct 07 j 09:43	0°♂	
opposition	-2065 Oct 31 j 00:05	20°♀58'02	0°15'23		-2060 Nov 14 j 21:19	0°♂	
greatest brilliancy	-2065 Oct 30 j 22:01	21°♀00'05	-1.6m	greatest brilliancy	-2060 Dec 07 j 12:04	17°♂49'39	1.2m
direct	-2065 Dec 07 j 06:45	12°♀20'14		evening set	-2060 Dec 19 j 17:41	27°♂27'24	
	-2064 Feb 08 j 12:18	0°♂			-2060 Dec 22 j 23:24	0°☿	
	-2064 Apr 06 j 06:02	0°♂			-2059 Jan 30 j 15:31	0°≈	
	-2064 May 26 j 23:30	0°☿					
	-2064 Jul 13 j 05:50	0°♂		conjunction	-2059 Feb 23 j 07:22	17°≈52'25	0°-58'-4
evening set	-2064 Aug 24 j 05:26	28°♂17'32		minimum elong	-2059 Feb 23 j 09:45	17°≈56'52	0°58'05
	-2064 Aug 26 j 16:30	0°♂			-2059 Mar 11 j 17:11	0°♂	
max. Earth dist.	-2064 Sep 08 j 07:22	8°♂50'49	2.48997 AU	max. Earth dist.	-2059 Apr 10 j 11:29	21°♂23'56	2.47760 AU
	-2064 Oct 07 j 16:32	0°♂			-2059 Apr 22 j 18:05	0°♀	
				morning rise	-2059 Apr 25 j 23:13	2°♀13'51	
conjunction	-2064 Oct 14 j 20:53	5°♂17'03	0°15'06		-2059 Jun 06 j 01:31	0°♂	
minimum elong	-2064 Oct 14 j 21:43	5°♂18'36	0°15'04	asc. node	-2059 Jun 15 j 21:49	6°♂27'25	
behind sun begin	-2064 Oct 14 j 12:54	5°♂02'18			-2059 Jul 22 j 19:26	0°♂	
behind sun end	-2064 Oct 15 j 06:33	5°♂34'53			-2059 Sep 10 j 16:37	0°☿	
desc. node	-2064 Nov 06 j 12:50	22°♂13'37			-2059 Nov 07 j 00:40	0°♂	
	-2064 Nov 16 j 18:30	0°♂		retrograde	-2058 Jan 06 j 16:48	16°♂25'31	
morning rise	-2064 Dec 11 j 03:10	18°♂44'29		opposition	-2058 Feb 13 j 11:07	7°♂58'37	4°41'53
	-2064 Dec 25 j 14:44	0°♂		greatest brilliancy	-2058 Feb 14 j 17:31	7°♂29'34	-1.5m
	-2063 Feb 02 j 00:11	0°☿		min. Earth dist.	-2058 Feb 19 j 09:54	5°♂42'36	0.60753 AU
	-2063 Mar 12 j 19:53	0°≈			-2058 Mar 09 j 14:08	30°♂	
	-2063 Apr 22 j 00:25	0°♂		direct	-2058 Mar 26 j 09:22	28°☿07'47	
	-2063 Jun 03 j 16:06	0°♀			-2058 Apr 12 j 23:31	0°♂	
	-2063 Jul 20 j 16:30	0°♂			-2058 Jun 20 j 13:42	0°♂	
asc. node	-2063 Sep 10 j 23:26	26°♂59'07		desc. node	-2058 Jun 29 j 08:13	5°♂18'25	
	-2063 Sep 18 j 17:33	0°♂			-2058 Aug 05 j 16:43	0°♂	
retrograde	-2063 Oct 26 j 10:51	7°♂42'20			-2058 Sep 15 j 20:43	0°♂	
	-2063 Nov 30 j 03:52	30°♂			-2058 Oct 24 j 22:44	0°♂	
min. Earth dist.	-2063 Dec 03 j 20:48	28°♂31'30	0.66353 AU		-2058 Dec 02 j 11:50	0°☿	
opposition	-2063 Dec 05 j 13:57	27°♂50'12	3°00'29		-2057 Jan 10 j 15:08	0°≈	
greatest brilliancy	-2063 Dec 05 j 06:29	27°♂57'42	-1.3m		-2057 Feb 20 j 04:30	0°♂	
direct	-2062 Jan 14 j 11:35	18°♂17'05		evening set	-2057 Feb 22 j 20:24	1°♂55'28	
	-2062 Mar 05 j 08:30	0°♂			-2057 Apr 03 j 15:36	0°♀	
	-2062 May 04 j 15:49	0°☿					
	-2062 Jun 23 j 08:34	0°♂		conjunction	-2057 Apr 20 j 09:56	11°♀27'42	0°-7'-58
	-2062 Aug 07 j 11:56	0°♂		minimum elong	-2057 Apr 20 j 10:20	11°♀28'23	0°07'57
	-2062 Sep 18 j 12:06	0°♂		behind sun begin	-2057 Apr 19 j 14:41	10°♀55'05	
desc. node	-2062 Sep 24 j 11:19	4°♂24'37		behind sun end	-2057 Apr 21 j 05:59	12°♀01'40	
evening set	-2062 Oct 14 j 15:59	19°♂34'25		asc. node	-2057 May 03 j 20:43	20°♀31'10	
	-2062 Oct 28 j 07:14	0°♂		max. Earth dist.	-2057 May 16 j 00:59	28°♀37'13	2.59275 AU
max. Earth dist.	-2062 Dec 02 j 14:00	27°♂29'01	2.37598 AU		-2057 May 18 j 03:05	0°♂	
	-2062 Dec 05 j 18:48	0°♂		morning rise	-2057 Jun 11 j 03:58	15°♂43'12	
					-2057 Jul 03 j 09:07	0°♂	
conjunction	-2062 Dec 15 j 09:21	7°♂34'02	0°-50'-33		-2057 Aug 20 j 02:39	0°☿	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 35

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2057 Oct 08 j 12:48	0°♈				-2051 Jan 27 j 23:52	0°♑		
	-2057 Nov 30 j 18:34	0°♐				-2051 Mar 18 j 20:01	0°♏		
retrograde	-2056 Feb 25 j 01:57	29°♐09'43				-2051 May 06 j 14:51	0°♐		
opposition	-2056 Mar 30 j 13:30	22°♐15'17	2°30'42			-2051 Jun 23 j 09:47	0°♏		
greatest brilliancy	-2056 Mar 31 j 19:17	21°♐49'43	-2.1m	evening set		-2051 Jun 29 j 22:05	4°♏09'07		
min. Earth dist.	-2056 Apr 08 j 02:29	19°♐20'06	0.49028 AU	max. Earth dist.		-2051 Jul 26 j 21:52	21°♏34'12	2.62867 AU	
direct	-2056 May 07 j 14:10	13°♐46'48				-2051 Aug 08 j 18:32	0°♈		
desc. node	-2056 May 16 j 07:42	14°♐17'52							
	-2056 Jun 30 j 20:26	0°♎		conjunction		-2051 Aug 15 j 06:47	4°♈18'16	1°07'27	
	-2056 Aug 18 j 18:04	0°♍		minimum elong		-2051 Aug 15 j 07:28	4°♈19'25	1°07'28	
	-2056 Sep 29 j 14:46	0°♌				-2051 Sep 22 j 08:53	0°♐		
	-2056 Nov 08 j 19:48	0°♋		morning rise		-2051 Sep 30 j 15:56	5°♐43'03		
	-2056 Dec 19 j 06:25	0°♊				-2051 Nov 04 j 04:11	0°♎		
	-2055 Jan 29 j 22:48	0°♑				-2051 Dec 15 j 10:00	0°♍		
	-2055 Mar 14 j 08:20	0°♑		desc. node		-2050 Jan 06 j 06:37	16°♍15'49		
asc. node	-2055 Mar 20 j 18:58	4°♑21'00				-2050 Jan 24 j 13:14	0°♌		
evening set	-2055 Apr 12 j 19:50	19°♑42'59				-2050 Mar 05 j 05:51	0°♋		
	-2055 Apr 28 j 11:17	0°♏				-2050 Apr 14 j 12:54	0°♊		
						-2050 May 27 j 07:03	0°♑		
conjunction	-2055 Jun 01 j 16:31	22°♏10'17	0°39'16			-2050 Jul 17 j 04:34	0°♑		
minimum elong	-2055 Jun 01 j 15:15	22°♏08'15	0°39'18	retrograde		-2050 Sep 05 j 20:03	14°♑19'13		
max. Earth dist.	-2055 Jun 09 j 20:13	27°♏24'22	2.65884 AU	min. Earth dist.		-2050 Oct 07 j 23:59	7°♑19'11	0.55404 AU	
	-2055 Jun 13 j 21:26	0°♐		opposition		-2050 Oct 14 j 17:19	4°♑43'06	-1°-12'-55	
morning rise	-2055 Jul 18 j 07:13	21°♐56'20		greatest brilliancy		-2050 Oct 14 j 07:02	4°♑53'03	-1.8m	
	-2055 Jul 30 j 23:36	0°♏				-2050 Oct 28 j 04:04	30°♑		
	-2055 Sep 16 j 05:31	0°♈		asc. node		-2050 Nov 10 j 15:52	27°♑09'42		
	-2055 Nov 02 j 13:06	0°♐		direct		-2050 Nov 19 j 14:01	26°♑38'05		
	-2055 Dec 20 j 12:40	0°♎				-2050 Dec 13 j 21:26	0°♑		
	-2054 Feb 09 j 05:04	0°♍				-2049 Feb 21 j 17:27	0°♏		
desc. node	-2054 Apr 03 j 08:44	25°♍12'33				-2049 Apr 15 j 23:44	0°♐		
	-2054 Apr 20 j 20:32	0°♌				-2049 Jun 04 j 11:12	0°♏		
retrograde	-2054 May 07 j 05:33	1°♌36'42				-2049 Jul 21 j 07:51	0°♈		
	-2054 May 23 j 09:00	30°♍		evening set		-2049 Aug 08 j 08:41	11°♌59'28		
opposition	-2054 Jun 06 j 13:28	26°♍34'52	-4°-19'-3	max. Earth dist.		-2049 Aug 25 j 09:06	23°♌32'51	2.53695 AU	
greatest brilliancy	-2054 Jun 07 j 01:10	26°♍27'02	-2.8m			-2049 Sep 03 j 17:30	0°♐		
min. Earth dist.	-2054 Jun 09 j 07:29	25°♍50'35	0.38126 AU						
direct	-2054 Jul 07 j 12:53	21°♍14'40		conjunction		-2049 Sep 26 j 14:40	16°♐06'11	0°36'37	
	-2054 Aug 14 j 18:25	0°♌		minimum elong		-2049 Sep 26 j 16:10	16°♐08'51	0°36'37	
	-2054 Oct 08 j 14:25	0°♋				-2049 Oct 15 j 21:05	0°♎		
	-2054 Nov 23 j 12:10	0°♊		morning rise		-2049 Nov 18 j 09:02	24°♎51'04		
	-2053 Jan 07 j 09:39	0°♑		desc. node		-2049 Nov 24 j 05:59	29°♎17'20		
asc. node	-2053 Feb 05 j 16:42	19°♑23'04				-2049 Nov 25 j 04:31	0°♍		
	-2053 Feb 21 j 21:44	0°♑				-2048 Jan 03 j 06:37	0°♌		
	-2053 Apr 09 j 09:18	0°♏				-2048 Feb 10 j 21:19	0°♋		
evening set	-2053 May 23 j 22:00	28°♏20'28				-2048 Mar 20 j 21:44	0°♊		
	-2053 May 26 j 12:44	0°♐				-2048 Apr 30 j 08:50	0°♑		
max. Earth dist.	-2053 Jul 03 j 15:43	24°♐14'19	2.67070 AU			-2048 Jun 12 j 16:31	0°♑		
						-2048 Aug 01 j 03:33	0°♏		
conjunction	-2053 Jul 09 j 15:04	28°♐03'11	1°06'19	asc. node		-2048 Sep 27 j 14:52	22°♏46'30		
minimum elong	-2053 Jul 09 j 14:16	28°♐01'56	1°06'21	retrograde		-2048 Oct 12 j 21:05	24°♏14'24		
	-2053 Jul 12 j 16:08	0°♏		min. Earth dist.		-2048 Nov 18 j 18:35	15°♏33'56	0.64435 AU	
morning rise	-2053 Aug 23 j 12:20	26°♏59'00		opposition		-2048 Nov 21 j 23:05	14°♏17'12	2°06'09	
	-2053 Aug 28 j 03:25	0°♈		greatest brilliancy		-2048 Nov 21 j 13:56	14°♏26'23	-1.4m	
	-2053 Oct 12 j 12:47	0°♐		direct		-2048 Dec 30 j 23:56	5°♏01'44		
	-2053 Nov 25 j 18:54	0°♎				-2047 Mar 20 j 00:11	0°♐		
	-2052 Jan 08 j 02:13	0°♍				-2047 May 13 j 14:31	0°♏		
desc. node	-2052 Feb 19 j 08:01	29°♍35'58				-2047 Jul 01 j 01:16	0°♈		
	-2052 Feb 19 j 21:44	0°♌				-2047 Aug 14 j 19:57	0°♐		
	-2052 Apr 03 j 08:41	0°♋		evening set		-2047 Sep 22 j 21:13	27°♐51'27		
	-2052 May 21 j 13:13	0°♊				-2047 Sep 25 j 19:16	0°♎		
retrograde	-2052 Jul 18 j 17:02	18°♊56'41		desc. node		-2047 Oct 11 j 04:17	11°♎24'47		
min. Earth dist.	-2052 Aug 14 j 17:15	14°♊04'21	0.42835 AU	max. Earth dist.		-2047 Oct 12 j 19:12	12°♎37'40	2.41298 AU	
greatest brilliancy	-2052 Aug 20 j 12:31	12°♊11'42	-2.5m			-2047 Nov 04 j 16:24	0°♍		
opposition	-2052 Aug 22 j 09:35	11°♊34'50	-5°-44'-25						
direct	-2052 Sep 22 j 21:25	5°♊31'54		conjunction		-2047 Nov 19 j 03:19	11°♍09'11	0°-26'-10	
	-2052 Dec 05 j 18:08	0°♑		minimum elong		-2047 Nov 19 j 01:27	11°♍05'36	0°26'11	
asc. node	-2052 Dec 23 j 16:12	9°♑39'27				-2047 Dec 13 j 06:38	0°♌		

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 36

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2046 Jan 20 j 10:39	0°☾				-2041 Mar 21 j 20:51	30°☾♏	
morning rise	-2046 Jan 23 j 17:36	2°☾34'44		direct		-2041 Apr 20 j 11:21	24°♏21'19	
	-2046 Feb 28 j 01:42	0°≈				-2041 May 21 j 04:38	0°♐	
	-2046 Apr 09 j 00:38	0°♐		desc. node		-2041 Jun 03 j 01:01	4°♐59'44	
	-2046 May 21 j 03:16	0°♑				-2041 Jul 18 j 16:06	0°♑	
	-2046 Jul 05 j 09:26	0°♒				-2041 Aug 31 j 10:03	0°♒	
asc. node	-2046 Aug 15 j 14:24	24°♒44'36				-2041 Oct 10 j 15:06	0°♓	
	-2046 Aug 25 j 03:32	0°♓				-2041 Nov 18 j 21:44	0°☾	
retrograde	-2046 Nov 16 j 13:44	28°♓29'32				-2041 Dec 28 j 15:27	0°≈	
opposition	-2046 Dec 26 j 10:49	18°♓53'30	4°04'13			-2040 Feb 07 j 17:48	0°♐	
greatest brilliancy	-2046 Dec 26 j 11:41	18°♓52'38	-1.2m			-2040 Mar 21 j 16:01	0°♑	
min. Earth dist.	-2046 Dec 27 j 01:52	18°♓38'29	0.67408 AU	evening set		-2040 Mar 25 j 20:32	2°♑51'26	
direct	-2045 Feb 05 j 07:24	9°♓01'17		asc. node		-2040 Apr 06 j 09:57	10°♑40'54	
	-2045 Apr 16 j 12:52	0°☾				-2040 May 05 j 10:58	0°♒	
	-2045 Jun 09 j 12:11	0°♏						
	-2045 Jul 25 j 19:46	0°♐		conjunction		-2040 May 16 j 20:41	7°♒28'12	0°22'58
desc. node	-2045 Aug 29 j 02:27	24°♐06'27		minimum elong		-2040 May 16 j 19:45	7°♒26'41	0°23'00
	-2045 Sep 06 j 04:30	0°♑		max. Earth dist.		-2040 May 31 j 10:46	16°♒56'39	2.63934 AU
	-2045 Oct 16 j 00:56	0°♒				-2040 Jun 20 j 17:44	0°♓	
evening set	-2045 Nov 23 j 04:39	29°♒46'17		morning rise		-2040 Jul 04 j 00:34	8°♓29'02	
	-2045 Nov 23 j 11:37	0°♓				-2040 Aug 06 j 23:21	0°☾	
	-2045 Dec 31 j 12:49	0°☾				-2040 Sep 23 j 19:28	0°♏	
						-2040 Nov 11 j 13:35	0°♐	
conjunction	-2044 Jan 28 j 13:46	21°☾52'24	-1°-6'-16			-2039 Jan 02 j 01:48	0°♑	
minimum elong	-2044 Jan 28 j 14:08	21°☾53'07	1°06'20			-2039 Mar 09 j 19:14	0°♒	
	-2044 Feb 08 j 03:09	0°≈		retrograde		-2039 Apr 05 j 21:23	4°♒06'32	
max. Earth dist.	-2044 Mar 18 j 19:27	29°≈47'24	2.42459 AU	desc. node		-2039 Apr 20 j 00:03	2°♒52'41	
	-2044 Mar 19 j 02:19	0°♐				-2039 May 02 j 10:22	30°♒♑	
morning rise	-2044 Apr 03 j 17:18	11°♐21'36		opposition		-2039 May 07 j 15:37	28°♑28'55	-1°-9'-41
	-2044 Apr 30 j 01:09	0°♑		greatest brilliancy		-2039 May 08 j 01:54	28°♑21'16	-2.6m
	-2044 Jun 13 j 09:48	0°♒		min. Earth dist.		-2039 May 14 j 09:13	26°♑29'05	0.41329 AU
asc. node	-2044 Jul 02 j 13:58	12°♒25'46		direct		-2039 Jun 10 j 13:36	21°♑54'27	
	-2044 Jul 30 j 15:10	0°♓				-2039 Jul 16 j 18:01	0°♒	
	-2044 Sep 20 j 08:53	0°☾				-2039 Sep 08 j 18:24	0°♓	
	-2044 Dec 01 j 02:29	0°♏				-2039 Oct 22 j 17:44	0°☾	
retrograde	-2044 Dec 21 j 22:11	2°♏26'14				-2039 Dec 04 j 07:12	0°≈	
	-2043 Jan 10 j 10:09	30°♒☾				-2038 Jan 16 j 10:08	0°♐	
opposition	-2043 Jan 29 j 12:33	23°☾34'31	4°48'56	asc. node		-2038 Feb 22 j 09:07	25°♐01'38	
greatest brilliancy	-2043 Jan 30 j 10:44	23°☾12'57	-1.4m			-2038 Mar 01 j 20:12	0°♑	
min. Earth dist.	-2043 Feb 03 j 00:23	21°☾49'47	0.63904 AU			-2038 Apr 16 j 15:32	0°♒	
direct	-2043 Mar 11 j 19:12	13°☾34'43		evening set		-2038 May 08 j 14:06	14°♒07'28	
	-2043 May 09 j 13:26	0°♏				-2038 Jun 02 j 10:07	0°♓	
	-2043 Jul 01 j 16:01	0°♐		max. Earth dist.		-2038 Jun 24 j 11:36	14°♓03'31	2.67249 AU
desc. node	-2043 Jul 16 j 02:02	9°♐23'36						
	-2043 Aug 14 j 20:51	0°♑		conjunction		-2038 Jun 25 j 04:31	14°♓30'29	0°58'38
	-2043 Sep 24 j 08:51	0°♒		minimum elong		-2038 Jun 25 j 03:22	14°♓28'38	0°58'40
	-2043 Nov 02 j 02:37	0°♓				-2038 Jul 19 j 11:28	0°☾	
	-2043 Dec 10 j 09:27	0°☾		morning rise		-2038 Aug 09 j 09:30	13°☾23'40	
	-2042 Jan 18 j 06:35	0°≈				-2038 Sep 04 j 03:46	0°♏	
evening set	-2042 Jan 30 j 09:01	9°≈08'31				-2038 Oct 20 j 02:39	0°♐	
	-2042 Feb 27 j 13:46	0°♐				-2038 Dec 04 j 08:53	0°♑	
						-2037 Jan 18 j 06:41	0°♒	
conjunction	-2042 Mar 31 j 15:28	22°♐54'52	0°-29'-4			-2037 Mar 04 j 17:59	0°♓	
minimum elong	-2042 Mar 31 j 17:05	22°♐57'43	0°29'05	desc. node		-2037 Mar 08 j 00:26	2°♓06'32	
	-2042 Apr 10 j 19:23	0°♑				-2037 Apr 23 j 04:48	0°☾	
max. Earth dist.	-2042 May 04 j 02:41	15°♑56'34	2.55296 AU	retrograde		-2037 Jun 24 j 09:34	20°☾29'25	
asc. node	-2042 May 20 j 11:42	26°♑54'47		min. Earth dist.		-2037 Jul 21 j 04:54	16°☾04'00	0.39004 AU
morning rise	-2042 May 25 j 15:31	0°♒19'52		greatest brilliancy		-2037 Jul 25 j 01:31	14°☾58'03	-2.8m
	-2042 May 25 j 03:30	0°♒		opposition		-2037 Jul 26 j 12:34	14°☾32'59	-6°-44'-32
	-2042 Jul 10 j 11:19	0°♓		direct		-2037 Aug 25 j 10:32	9°☾20'25	
	-2042 Aug 27 j 17:59	0°☾				-2037 Oct 29 j 15:03	0°≈	
	-2042 Oct 17 j 21:55	0°♏				-2037 Dec 21 j 03:06	0°♐	
	-2042 Dec 17 j 10:51	0°♐		asc. node		-2036 Jan 10 j 08:01	12°♐21'46	
retrograde	-2041 Feb 03 j 19:24	11°♐12'55				-2036 Feb 07 j 18:18	0°♑	
opposition	-2041 Mar 11 j 20:14	3°♐35'58	3°46'54			-2036 Mar 26 j 20:21	0°♒	
greatest brilliancy	-2041 Mar 13 j 08:54	3°♐02'41	-1.8m			-2036 May 13 j 19:39	0°♓	
min. Earth dist.	-2041 Mar 19 j 18:09	0°♐44'15	0.54152 AU	evening set		-2036 Jun 15 j 05:12	20°♓25'14	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 37

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2036 Jun 30 j 06:39	0°☿					-2031 Jan 28 j 02:00	0°♄			
max. Earth dist.	-2036 Jul 17 j 07:12	10°☿55'02	2.65134 AU				-2031 Mar 07 j 19:09	0°♁			
							-2031 Apr 16 j 20:19	0°♂			
conjunction	-2036 Jul 31 j 09:27	20°☿02'30	1°10'26				-2031 May 29 j 05:01	0°♂			
minimum elong	-2036 Jul 31 j 09:32	20°☿02'38	1°10'27				-2031 Jul 14 j 07:57	0°♂			
	-2036 Aug 15 j 15:03	0°♂				asc. node	-2031 Sep 01 j 05:37	27°♂14'49			
morning rise	-2036 Sep 14 j 18:14	20°♂02'23					-2031 Sep 07 j 01:09	0°♂			
	-2036 Sep 29 j 11:14	0°♂				retrograde	-2031 Nov 03 j 03:43	15°♂38'54			
	-2036 Nov 11 j 17:28	0°♂				min. Earth dist.	-2031 Dec 12 j 09:08	6°♂12'35	0.67018 AU		
	-2036 Dec 23 j 14:02	0°♂				opposition	-2031 Dec 13 j 06:02	5°♂51'39	3°27'01		
desc. node	-2035 Jan 22 j 23:34	22°♂16'29				greatest brilliancy	-2031 Dec 13 j 00:54	5°♂56'47	-1.3m		
	-2035 Feb 02 j 10:31	0°♂					-2031 Dec 29 j 03:43	30°♂			
	-2035 Mar 14 j 23:21	0°♄				direct	-2030 Jan 22 j 13:22	26°♂10'34			
	-2035 Apr 25 j 12:02	0°♁					-2030 Feb 18 j 03:32	0°♂			
	-2035 Jun 10 j 07:45	0°♂					-2030 Apr 28 j 04:23	0°☿			
retrograde	-2035 Aug 19 j 16:18	25°♂35'06					-2030 Jun 18 j 01:45	0°♂			
min. Earth dist.	-2035 Sep 18 j 17:00	19°♂24'31	0.50590 AU				-2030 Aug 02 j 14:27	0°♂			
greatest brilliancy	-2035 Sep 25 j 08:07	16°♂56'55	-2.1m				-2030 Sep 13 j 17:59	0°♂			
opposition	-2035 Sep 26 j 10:47	16°♂32'09	-2°-55'-9			desc. node	-2030 Sep 14 j 20:38	0°♂49'01			
direct	-2035 Oct 30 j 16:11	9°♂08'14					-2030 Oct 23 j 13:47	0°♂			
asc. node	-2035 Nov 27 j 06:53	13°♂28'17				evening set	-2030 Oct 28 j 02:32	3°♂29'40			
	-2034 Jan 07 j 07:36	0°♂					-2030 Dec 01 j 00:55	0°♂			
	-2034 Mar 04 j 04:12	0°♂									
	-2034 Apr 24 j 01:23	0°♂				conjunction	-2030 Dec 31 j 03:11	23°♂44'09	-1°00'-18		
	-2034 Jun 11 j 16:50	0°☿				minimum elong	-2030 Dec 31 j 00:44	23°♂39'20	1°00'21		
evening set	-2034 Jul 23 j 13:01	26°☿52'32					-2029 Jan 08 j 02:11	0°♄			
	-2034 Jul 28 j 07:07	0°♂				max. Earth dist.	-2029 Jan 31 j 06:20	18°♄07'18	2.37907 AU		
max. Earth dist.	-2034 Aug 12 j 20:39	10°♂20'36	2.57815 AU				-2029 Feb 15 j 15:31	0°♁			
						morning rise	-2029 Mar 10 j 02:39	17°♁03'05			
conjunction	-2034 Sep 09 j 04:32	28°♂56'05	0°52'46				-2029 Mar 27 j 12:56	0°♂			
minimum elong	-2034 Sep 09 j 05:59	28°♂58'35	0°52'46				-2029 May 08 j 11:01	0°♂			
	-2034 Sep 10 j 17:31	0°♂					-2029 Jun 21 j 23:35	0°♂			
	-2034 Oct 23 j 02:06	0°♂				asc. node	-2029 Jul 20 j 04:23	17°♂56'44			
morning rise	-2034 Oct 28 j 16:35	4°♂04'16					-2029 Aug 09 j 00:08	0°♂			
	-2034 Dec 02 j 16:52	0°♂					-2029 Oct 03 j 03:48	0°☿			
desc. node	-2034 Dec 10 j 22:04	6°♂11'43				retrograde	-2029 Dec 08 j 07:18	19°☿11'23			
	-2033 Jan 11 j 02:54	0°♂				opposition	-2028 Jan 16 j 13:02	9°☿59'35	4°41'02		
	-2033 Feb 19 j 01:15	0°♄				greatest brilliancy	-2028 Jan 17 j 02:22	9°☿46'27	-1.3m		
	-2033 Mar 30 j 09:23	0°♁				min. Earth dist.	-2028 Jan 19 j 12:47	8°☿48'58	0.66059 AU		
	-2033 May 10 j 08:09	0°♂					-2028 Feb 24 j 23:05	30°♂			
	-2033 Jun 23 j 22:01	0°♂				direct	-2028 Feb 26 j 20:21	29°♂58'40			
	-2033 Aug 18 j 13:11	0°♂					-2028 Feb 28 j 17:55	0°☿			
retrograde	-2033 Sep 29 j 19:47	9°♂56'44					-2028 May 23 j 00:15	0°♂			
asc. node	-2033 Oct 15 j 06:19	8°♂16'32					-2028 Jul 11 j 01:41	0°♂			
min. Earth dist.	-2033 Nov 04 j 00:02	1°♂51'26	0.61566 AU			desc. node	-2028 Aug 01 j 18:36	14°♂43'13			
opposition	-2033 Nov 08 j 15:26	0°♂00'26	0°59'48				-2028 Aug 23 j 06:47	0°♂			
greatest brilliancy	-2033 Nov 08 j 08:56	0°♂06'55	-1.5m				-2028 Oct 02 j 10:22	0°♂			
	-2033 Nov 08 j 15:52	30°♂					-2028 Nov 09 j 23:56	0°♂			
direct	-2033 Dec 16 j 14:47	21°♂07'36					-2028 Dec 18 j 03:21	0°♄			
	-2032 Jan 27 j 19:09	0°♂				evening set	-2027 Jan 04 j 04:23	13°♄18'16			
	-2032 Mar 30 j 23:38	0°♂					-2027 Jan 25 j 20:30	0°♁			
	-2032 May 21 j 19:35	0°☿					-2027 Mar 06 j 23:01	0°♂			
	-2032 Jul 08 j 11:17	0°♂									
	-2032 Aug 22 j 00:57	0°♂				conjunction	-2027 Mar 09 j 05:01	1°♂38'36	0°-48'-58		
evening set	-2032 Sep 03 j 10:13	8°♂40'24				minimum elong	-2027 Mar 09 j 07:32	1°♂43'11	0°48'58		
max. Earth dist.	-2032 Sep 18 j 07:31	19°♂17'35	2.46228 AU				-2027 Apr 18 j 00:20	0°♂			
	-2032 Oct 03 j 01:02	0°♂				max. Earth dist.	-2027 Apr 20 j 00:21	1°♂23'24	2.50573 AU		
						morning rise	-2027 May 07 j 08:26	13°♂17'48			
conjunction	-2032 Oct 26 j 19:45	17°♂40'59	0°00'45				-2027 Jun 01 j 06:23	0°♂			
minimum elong	-2032 Oct 26 j 19:50	17°♂41'08	0°00'44			asc. node	-2027 Jun 06 j 03:55	3°♂13'42			
behind sun begin	-2032 Oct 25 j 20:04	16°♂56'26					-2027 Jul 17 j 18:38	0°♂			
behind sun end	-2032 Oct 27 j 19:36	18°♂25'53					-2027 Sep 04 j 21:31	0°☿			
desc. node	-2032 Oct 27 j 21:56	18°♂30'15					-2027 Oct 29 j 01:40	0°♂			
	-2032 Nov 12 j 01:15	0°♂				retrograde	-2026 Jan 16 j 07:43	25°♂19'03			
	-2032 Dec 20 j 19:00	0°♂				opposition	-2026 Feb 22 j 13:19	17°♂08'03	4°28'46		
morning rise	-2032 Dec 26 j 02:15	4°♂08'52				greatest brilliancy	-2026 Feb 23 j 23:22	16°♂36'02	-1.6m		
greatest brilliancy	-2031 Jan 28 j 01:55	29°♂59'52	1.2m			min. Earth dist.	-2026 Mar 01 j 07:03	14°♂36'21	0.58632 AU		

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 38

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

direct	-2026 Apr 04 j 03:56	7°♂26'11		evening set	-2021 Jun 01 j 11:05	6°♂42'33	
	-2026 Jun 12 j 01:30	0°♎			-2021 Jul 08 j 02:21	0°♎	
desc. node	-2026 Jun 19 j 17:19	4°♎16'59		max. Earth dist.	-2021 Jul 08 j 23:50	0°♎34'20	2.66614 AU
	-2026 Jul 30 j 09:06	0°♎					
	-2026 Sep 10 j 05:03	0°♎		conjunction	-2021 Jul 17 j 20:42	6°♎15'21	1°09'00
	-2026 Oct 19 j 14:22	0°♎		minimum elong	-2021 Jul 17 j 20:13	6°♎14'34	1°09'03
	-2026 Nov 27 j 08:16	0°♎			-2021 Aug 23 j 12:24	0°♎	
	-2025 Jan 05 j 15:21	0°♎		morning rise	-2021 Aug 31 j 18:49	5°♎25'22	
	-2025 Feb 15 j 08:01	0°♎			-2021 Oct 07 j 16:47	0°♎	
evening set	-2025 Mar 07 j 01:08	14°♎03'54			-2021 Nov 20 j 13:15	0°♎	
	-2025 Mar 29 j 21:55	0°♎			-2020 Jan 02 j 05:55	0°♎	
asc. node	-2025 Apr 24 j 02:39	17°♎07'32		desc. node	-2020 Feb 09 j 16:30	27°♎29'55	
					-2020 Feb 13 j 04:05	0°♎	
conjunction	-2025 Apr 30 j 19:22	21°♎36'30	0°03'58		-2020 Mar 26 j 04:08	0°♎	
minimum elong	-2025 Apr 30 j 19:12	21°♎36'13	0°03'59		-2020 May 09 j 11:23	0°♎	
behind sun begin	-2025 Apr 29 j 22:02	21°♎00'54			-2020 Jul 08 j 01:00	0°♎	
behind sun end	-2025 May 01 j 16:22	22°♎11'31		retrograde	-2020 Jul 31 j 03:58	3°♎37'44	
	-2025 May 13 j 10:49	0°♎			-2020 Aug 22 j 20:12	30°♎	
max. Earth dist.	-2025 May 22 j 07:32	5°♎49'44	2.61153 AU	min. Earth dist.	-2020 Aug 28 j 03:22	28°♎18'48	0.45529 AU
morning rise	-2025 Jun 20 j 02:22	24°♎30'27		greatest brilliancy	-2020 Sep 03 j 11:11	26°♎08'02	-2.3m
	-2025 Jun 28 j 15:57	0°♎		opposition	-2020 Sep 05 j 04:41	25°♎32'03	-4°-45'-46
	-2025 Aug 15 j 03:37	0°♎		direct	-2020 Oct 07 j 15:03	18°♎58'13	
	-2025 Oct 02 j 20:32	0°♎			-2020 Nov 22 j 16:08	0°♎	
	-2025 Nov 22 j 22:26	0°♎		asc. node	-2020 Dec 13 j 22:40	9°♎42'33	
	-2024 Jan 22 j 02:24	0°♎			-2019 Jan 20 j 22:30	0°♎	
retrograde	-2024 Mar 09 j 15:56	11°♎01'05			-2019 Mar 13 j 06:47	0°♎	
opposition	-2024 Apr 12 j 03:36	4°♎33'01	1°26'04		-2019 May 01 j 16:29	0°♎	
greatest brilliancy	-2024 Apr 12 j 22:03	4°♎17'50	-2.3m		-2019 Jun 18 j 18:05	0°♎	
min. Earth dist.	-2024 Apr 20 j 12:44	1°♎47'53	0.46152 AU	evening set	-2019 Jul 08 j 09:30	12°♎32'50	
	-2024 Apr 26 j 12:10	30°♎		max. Earth dist.	-2019 Aug 01 j 21:00	28°♎28'10	2.61294 AU
desc. node	-2024 May 06 j 17:08	27°♎41'30			-2019 Aug 04 j 04:49	0°♎	
direct	-2024 May 18 j 22:54	26°♎39'12					
	-2024 Jun 10 j 13:56	0°♎		conjunction	-2019 Aug 24 j 01:09	13°♎12'07	1°03'32
	-2024 Aug 09 j 23:10	0°♎		minimum elong	-2019 Aug 24 j 02:11	13°♎13'51	1°03'33
	-2024 Sep 22 j 16:39	0°♎			-2019 Sep 17 j 18:09	0°♎	
	-2024 Nov 02 j 17:55	0°♎		morning rise	-2019 Oct 10 j 07:01	15°♎41'30	
	-2024 Dec 13 j 17:15	0°♎			-2019 Oct 30 j 09:47	0°♎	
	-2023 Jan 24 j 18:35	0°♎			-2019 Dec 10 j 10:06	0°♎	
	-2023 Mar 09 j 10:48	0°♎		desc. node	-2019 Dec 27 j 16:10	12°♎54'28	
asc. node	-2023 Mar 11 j 00:44	1°♎03'51			-2018 Jan 19 j 06:25	0°♎	
evening set	-2023 Apr 22 j 11:32	29°♎10'03			-2018 Feb 27 j 15:06	0°♎	
	-2023 Apr 23 j 18:11	0°♎			-2018 Apr 08 j 11:06	0°♎	
	-2023 Jun 09 j 06:30	0°♎			-2018 May 20 j 06:43	0°♎	
					-2018 Jul 06 j 13:06	0°♎	
conjunction	-2023 Jun 10 j 09:38	0°♎43'24	0°47'21	retrograde	-2018 Sep 14 j 22:43	24°♎25'37	
minimum elong	-2023 Jun 10 j 08:19	0°♎41'18	0°47'23	min. Earth dist.	-2018 Oct 18 j 05:23	17°♎00'43	0.57820 AU
max. Earth dist.	-2023 Jun 15 j 06:02	3°♎49'25	2.66600 AU	opposition	-2018 Oct 24 j 06:07	14°♎38'45	0°-19'-58
morning rise	-2023 Jul 26 j 09:16	0°♎02'29		greatest brilliancy	-2018 Oct 24 j 03:38	14°♎41'10	-1.7m
	-2023 Jul 26 j 07:43	0°♎		asc. node	-2018 Oct 31 j 20:55	11°♎45'48	
	-2023 Sep 11 j 07:39	0°♎		direct	-2018 Nov 29 j 22:54	6°♎14'28	
	-2023 Oct 28 j 01:18	0°♎			-2017 Feb 13 j 18:28	0°♎	
	-2023 Dec 13 j 19:24	0°♎			-2017 Apr 10 j 07:38	0°♎	
	-2022 Jan 30 j 13:26	0°♎			-2017 May 30 j 12:17	0°♎	
	-2022 Mar 23 j 23:10	0°♎			-2017 Jul 16 j 15:19	0°♎	
desc. node	-2022 Mar 24 j 16:26	0°♎21'57		evening set	-2017 Aug 17 j 19:38	21°♎32'01	
retrograde	-2022 May 25 j 07:04	19°♎16'34			-2017 Aug 30 j 02:45	0°♎	
opposition	-2022 Jun 24 j 18:01	14°♎12'39	-5°-47'-54	max. Earth dist.	-2017 Sep 02 j 11:21	2°♎20'08	2.51164 AU
min. Earth dist.	-2022 Jun 24 j 10:13	14°♎17'51	0.37582 AU				
greatest brilliancy	-2022 Jun 24 j 15:00	14°♎14'40	-2.9m	conjunction	-2017 Oct 07 j 06:28	27°♎06'58	0°24'54
direct	-2022 Jul 24 j 19:06	9°♎12'23		minimum elong	-2017 Oct 07 j 07:41	27°♎09'10	0°24'53
	-2022 Sep 26 j 11:34	0°♎			-2017 Oct 11 j 05:28	0°♎	
	-2022 Nov 15 j 17:16	0°♎		desc. node	-2017 Nov 14 j 14:47	25°♎34'46	
	-2021 Jan 01 j 05:10	0°♎			-2017 Nov 20 j 10:43	0°♎	
asc. node	-2021 Jan 26 j 23:43	16°♎43'46		morning rise	-2017 Dec 01 j 08:39	8°♎19'53	
	-2021 Feb 16 j 12:55	0°♎			-2017 Dec 29 j 09:52	0°♎	
	-2021 Apr 04 j 11:16	0°♎			-2016 Feb 05 j 21:33	0°♎	
	-2021 May 21 j 20:36	0°♎			-2016 Mar 15 j 18:35	0°♎	

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-2016 Apr 25 j 00:17	0° H				-2011 Apr 27 j 01:32	0° Ω	
	-2016 Jun 06 j 19:57	0° Υ				-2011 Jun 24 j 22:17	0° M	
	-2016 Jul 24 j 12:47	0° B		desc. node		-2011 Jul 06 j 09:58	7° M 12'22	
asc. node	-2016 Sep 17 j 20:46	26° B 25'06				-2011 Aug 09 j 04:17	0° Ω	
	-2016 Sep 30 j 09:44	0° Π				-2011 Sep 19 j 01:50	0° M	
retrograde	-2016 Oct 20 j 17:41	2° Π 29'41				-2011 Oct 28 j 00:15	0° J	
	-2016 Nov 08 j 21:52	30° R B				-2011 Dec 05 j 10:12	0° B	
min. Earth dist.	-2016 Nov 27 j 12:06	23° B 31'47	0.65616 AU			-2010 Jan 13 j 09:52	0° \approx	
opposition	-2016 Nov 29 j 20:52	22° B 34'48	2°39'18	evening set		-2010 Feb 12 j 23:32	22° \approx 49'40	
greatest brilliancy	-2016 Nov 29 j 12:09	22° B 43'33	-1.3m			-2010 Feb 22 j 19:04	0° H	
direct	-2015 Jan 08 j 09:50	13° B 08'52				-2010 Apr 06 j 02:20	0° Υ	
	-2015 Mar 11 j 08:11	0° Π						
	-2015 May 07 j 20:05	0° B		conjunction		-2010 Apr 12 j 03:39	4° Υ 10'40	0°-16'-54
	-2015 Jun 26 j 00:35	0° Ω		minimum elong		-2010 Apr 12 j 04:34	4° Υ 12'14	0°16'54
	-2015 Aug 10 j 01:31	0° M		asc. node		-2010 May 10 j 18:04	23° Υ 33'12	
	-2015 Sep 21 j 02:30	0° Ω		max. Earth dist.		-2010 May 11 j 04:38	23° Υ 50'49	2.57583 AU
desc. node	-2015 Oct 01 j 12:57	7° Ω 43'14				-2010 May 20 j 10:48	0° B	
evening set	-2015 Oct 04 j 21:13	10° Ω 13'00		morning rise		-2010 Jun 04 j 06:14	9° B 44'00	
	-2015 Oct 30 j 23:20	0° M				-2010 Jul 05 j 16:23	0° Π	
max. Earth dist.	-2015 Nov 03 j 06:31	2° M 32'16	2.38916 AU			-2010 Aug 22 j 14:03	0° B	
						-2010 Oct 11 j 14:37	0° Ω	
conjunction	-2015 Dec 03 j 14:16	26° M 08'11	0°-40'-47			-2010 Dec 06 j 00:09	0° M	
minimum elong	-2015 Dec 03 j 11:31	26° M 02'47	0°40'48	retrograde		-2009 Feb 15 j 12:38	21° M 34'48	
	-2015 Dec 08 j 12:21	0° J		opposition		-2009 Mar 22 j 17:11	14° M 20'29	3°07'49
	-2014 Jan 15 j 15:08	0° B		greatest brilliancy		-2009 Mar 24 j 03:28	13° M 50'13	-2.0m
morning rise	-2014 Feb 09 j 10:31	19° B 22'28		min. Earth dist.		-2009 Mar 31 j 01:32	11° M 24'14	0.51355 AU
	-2014 Feb 23 j 05:06	0° \approx		direct		-2009 Apr 30 j 13:12	5° M 28'39	
	-2014 Apr 04 j 02:33	0° H		desc. node		-2009 May 24 j 08:59	9° M 03'55	
	-2014 May 16 j 02:06	0° Υ				-2009 Jul 09 j 11:29	0° Ω	
	-2014 Jun 29 j 22:51	0° B				-2009 Aug 24 j 12:54	0° M	
asc. node	-2014 Aug 05 j 21:03	22° B 47'52				-2009 Oct 04 j 13:34	0° J	
	-2014 Aug 18 j 07:59	0° Π				-2009 Nov 13 j 07:13	0° B	
	-2014 Oct 20 j 22:58	0° B				-2009 Dec 23 j 09:02	0° \approx	
retrograde	-2014 Nov 24 j 09:04	6° B 17'31				-2008 Feb 02 j 17:36	0° H	
	-2014 Dec 25 j 21:11	30° R Π				-2008 Mar 16 j 20:44	0° Υ	
opposition	-2013 Jan 03 j 01:55	26° Π 49'19	4°20'57	asc. node		-2008 Mar 27 j 16:50	7° Υ 20'36	
greatest brilliancy	-2013 Jan 03 j 06:55	26° Π 44'21	-1.2m	evening set		-2008 Apr 05 j 07:05	13° Υ 06'55	
min. Earth dist.	-2013 Jan 04 j 13:17	26° Π 14'12	0.67204 AU			-2008 Apr 30 j 18:47	0° B	
direct	-2013 Feb 13 j 03:58	16° Π 52'43						
	-2013 Apr 06 j 22:41	0° B		conjunction		-2008 May 26 j 00:45	16° B 26'21	0°32'46
	-2013 Jun 03 j 11:35	0° Ω		minimum elong		-2008 May 25 j 23:34	16° B 24'27	0°32'48
	-2013 Jul 20 j 14:34	0° M		max. Earth dist.		-2008 Jun 06 j 01:24	23° B 32'56	2.65116 AU
desc. node	-2013 Aug 19 j 11:32	20° M 46'12				-2008 Jun 16 j 02:37	0° Π	
	-2013 Sep 01 j 06:02	0° Ω		morning rise		-2008 Jul 12 j 06:25	16° Π 41'25	
	-2013 Oct 11 j 05:01	0° M				-2008 Aug 02 j 05:43	0° B	
	-2013 Nov 18 j 16:23	0° J				-2008 Sep 18 j 17:13	0° Ω	
evening set	-2013 Dec 08 j 15:17	15° J 44'13				-2008 Nov 05 j 14:17	0° M	
	-2013 Dec 26 j 17:48	0° B				-2008 Dec 24 j 19:34	0° Ω	
	-2012 Feb 03 j 08:20	0° \approx				-2007 Feb 17 j 04:21	0° M	
				desc. node		-2007 Apr 10 j 09:46	18° M 29'48	
conjunction	-2012 Feb 12 j 23:13	7° \approx 20'13	-1°-3'-2	retrograde		-2007 Apr 23 j 03:58	19° M 28'21	
minimum elong	-2012 Feb 13 j 01:01	7° \approx 23'37	1°03'05	opposition		-2007 May 23 j 23:26	14° M 14'58	-2°-56'-55
	-2012 Mar 14 j 07:36	0° H		greatest brilliancy		-2007 May 24 j 15:30	14° M 03'45	-2.8m
max. Earth dist.	-2012 Apr 01 j 22:34	13° H 30'52	2.45389 AU	min. Earth dist.		-2007 May 28 j 20:23	12° M 53'35	0.39251 AU
morning rise	-2012 Apr 16 j 17:20	24° H 01'24		direct		-2007 Jun 25 j 03:48	8° M 25'32	
	-2012 Apr 25 j 06:09	0° Υ				-2007 Aug 27 j 20:21	0° J	
	-2012 Jun 08 j 12:18	0° B				-2007 Oct 14 j 16:45	0° B	
asc. node	-2012 Jun 22 j 19:21	9° B 20'27				-2007 Nov 27 j 18:37	0° \approx	
	-2012 Jul 25 j 09:00	0° Π				-2006 Jan 10 j 17:43	0° H	
	-2012 Sep 13 j 20:12	0° B		asc. node		-2006 Feb 12 j 14:25	22° H 00'55	
	-2012 Nov 13 j 10:47	0° Ω				-2006 Feb 24 j 16:25	0° Υ	
retrograde	-2012 Dec 30 j 18:47	10° Ω 48'14				-2006 Apr 11 j 19:32	0° B	
opposition	-2011 Feb 06 j 23:05	2° Ω 09'44	4°46'34	evening set		-2006 May 17 j 11:14	22° B 48'14	
greatest brilliancy	-2011 Feb 08 j 02:02	1° Ω 43'47	-1.4m			-2006 May 28 j 18:34	0° Π	
min. Earth dist.	-2011 Feb 12 j 06:59	0° Ω 06'48	0.62279 AU	max. Earth dist.		-2006 Jun 29 j 19:09	20° Π 22'46	2.67261 AU
	-2011 Feb 12 j 14:08	30° R B						
direct	-2011 Mar 20 j 02:27	22° B 13'47		conjunction		-2006 Jul 03 j 12:07	22° Π 44'34	1°03'32

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

minimum elong	-2006 Jul 03 j 11:09	22° II 43'02	1°03'35			-2001 Aug 07 j 07:57	0° B	
	-2006 Jul 14 j 20:58	0° B		asc. node		-2001 Oct 05 j 12:20	18° B 39'36	
morning rise	-2006 Aug 17 j 11:11	21° B 35'09		retrograde		-2001 Oct 07 j 23:51	18° B 42'03	
	-2006 Aug 30 j 10:38	0° Q		min. Earth dist.		-2001 Nov 13 j 03:37	10° B 16'27	0.63269 AU
	-2006 Oct 15 j 02:15	0° M		opposition		-2001 Nov 16 j 23:32	8° B 44'29	1°40'00
	-2006 Nov 28 j 18:37	0° A		greatest brilliancy		-2001 Nov 16 j 14:47	8° B 53'15	-1.5m
	-2005 Jan 11 j 17:27	0° M				-2001 Dec 18 j 01:35	30° R Y	
	-2005 Feb 24 j 11:46	0° A		direct		-2001 Dec 25 j 13:26	29° Y 38'18	
desc. node	-2005 Feb 26 j 09:26	1° A 17'43				-2000 Jan 02 j 06:23	0° B	
	-2005 Apr 10 j 16:34	0° B				-2000 Mar 24 j 02:43	0° II	
	-2005 Jun 04 j 22:33	0° \approx				-2000 May 16 j 10:44	0° B	
retrograde	-2005 Jul 09 j 06:39	7° \approx 26'53				-2000 Jul 03 j 14:10	0° Q	
min. Earth dist.	-2005 Aug 04 j 21:33	2° \approx 51'00	0.40895 AU			-2000 Aug 17 j 08:09	0° M	
greatest brilliancy	-2005 Aug 10 j 00:01	1° \approx 17'22	-2.6m	evening set		-2000 Sep 14 j 05:23	19° M 42'34	
opposition	-2005 Aug 11 j 19:30	0° \approx 43'45	-6°-20'-33			-2000 Sep 28 j 09:00	0° A	
	-2005 Aug 14 j 04:43	30° R B		max. Earth dist.		-2000 Sep 30 j 17:25	1° A 43'37	2.43473 AU
direct	-2005 Sep 11 j 13:15	25° B 05'24		desc. node		-2000 Oct 18 j 06:09	14° A 45'32	
	-2005 Oct 10 j 07:59	0° \approx				-2000 Nov 07 j 08:29	0° M	
	-2005 Dec 12 j 19:46	0° H						
asc. node	-2005 Dec 31 j 13:24	10° H 48'53		conjunction		-2000 Nov 08 j 15:13	0° M 58'50	0°-14'-31
	-2004 Feb 01 j 14:46	0° Y		minimum elong		-2000 Nov 08 j 14:13	0° M 56'56	0°14'33
	-2004 Mar 21 j 14:06	0° B		behind sun begin		-2000 Nov 08 j 02:40	0° M 34'48	
	-2004 May 08 j 23:53	0° II		behind sun end		-2000 Nov 09 j 01:47	1° M 19'04	
evening set	-2004 Jun 23 j 15:38	28° II 43'39				-2000 Dec 16 j 00:40	0° A	
	-2004 Jun 25 j 15:37	0° B		morning rise		-1999 Jan 10 j 22:23	20° A 20'17	
max. Earth dist.	-2004 Jul 22 j 21:52	17° B 30'40	2.63987 AU			-1999 Jan 23 j 05:49	0° B	
						-1999 Mar 02 j 21:09	0° \approx	
conjunction	-2004 Aug 08 j 20:38	28° B 34'12	1°09'15			-1999 Apr 11 j 19:42	0° H	
minimum elong	-2004 Aug 08 j 21:05	28° B 34'56	1°09'17			-1999 May 23 j 22:56	0° Y	
	-2004 Aug 11 j 00:51	0° Q				-1999 Jul 08 j 10:23	0° B	
morning rise	-2004 Sep 23 j 16:50	29° Q 15'49		asc. node		-1999 Aug 22 j 11:44	26° B 24'23	
	-2004 Sep 24 j 18:42	0° M				-1999 Aug 29 j 07:44	0° II	
	-2004 Nov 06 j 19:23	0° A		retrograde		-1999 Nov 10 j 20:39	23° II 29'29	
	-2004 Dec 18 j 08:09	0° M		opposition		-1999 Dec 20 j 20:42	13° II 48'06	3°49'58
desc. node	-2003 Jan 13 j 08:08	19° M 13'10		greatest brilliancy		-1999 Dec 20 j 18:41	13° II 50'07	-1.2m
	-2003 Jan 27 j 18:43	0° A		min. Earth dist.		-1999 Dec 20 j 20:03	13° II 48'45	0.67357 AU
	-2003 Mar 08 j 19:13	0° B		direct		-1998 Jan 30 j 11:58	4° II 00'13	
	-2003 Apr 18 j 12:17	0° \approx				-1998 Apr 21 j 00:00	0° B	
	-2003 Jun 01 j 03:44	0° H				-1998 Jun 12 j 13:36	0° Q	
	-2003 Jul 27 j 04:06	0° Y				-1998 Jul 28 j 14:15	0° M	
retrograde	-2003 Aug 29 j 17:13	6° Y 59'58		desc. node		-1998 Sep 05 j 03:59	27° M 15'50	
min. Earth dist.	-2003 Sep 29 j 22:07	0° Y 21'39	0.53311 AU			-1998 Sep 08 j 21:48	0° A	
	-2003 Sep 30 j 21:11	30° R H				-1998 Oct 18 j 18:53	0° M	
greatest brilliancy	-2003 Oct 06 j 10:56	27° H 52'28	-1.9m	evening set		-1998 Nov 11 j 13:11	18° M 27'05	
opposition	-2003 Oct 07 j 03:53	27° H 36'19	-1°-54'-48			-1998 Nov 26 j 06:08	0° A	
direct	-2003 Nov 11 j 08:19	19° H 48'27				-1997 Jan 03 j 07:12	0° B	
asc. node	-2003 Nov 17 j 13:13	20° H 03'02						
	-2003 Dec 26 j 05:05	0° Y		conjunction		-1997 Jan 16 j 05:50	10° B 08'53	-1°-5'-34
	-2002 Feb 25 j 14:30	0° B		minimum elong		-1997 Jan 16 j 04:53	10° B 07'02	1°05'38
	-2002 Apr 18 j 18:01	0° II				-1997 Feb 10 j 20:33	0° \approx	
	-2002 Jun 06 j 21:06	0° B		max. Earth dist.		-1997 Mar 04 j 13:13	16° \approx 28'36	2.40191 AU
	-2002 Jul 23 j 15:55	0° Q				-1997 Mar 22 j 17:50	0° H	
evening set	-2002 Aug 01 j 11:38	5° Q 49'44		morning rise		-1997 Mar 25 j 00:09	1° H 39'45	
max. Earth dist.	-2002 Aug 19 j 19:35	18° Q 08'03	2.55628 AU			-1997 May 03 j 14:49	0° Y	
	-2002 Sep 06 j 03:10	0° M				-1997 Jun 16 j 23:13	0° B	
				asc. node		-1997 Jul 10 j 11:32	15° B 09'13	
conjunction	-2002 Sep 18 j 21:57	8° M 55'03	0°44'08			-1997 Aug 03 j 09:53	0° II	
minimum elong	-2002 Sep 18 j 23:29	8° M 57'45	0°44'08			-1997 Sep 25 j 04:32	0° B	
	-2002 Oct 18 j 09:56	0° A		retrograde		-1997 Dec 16 j 13:19	27° B 09'34	
morning rise	-2002 Nov 09 j 01:38	15° A 54'22		opposition		-1996 Jan 24 j 11:34	18° B 08'24	4°46'58
	-2002 Nov 27 j 21:24	0° M		greatest brilliancy		-1996 Jan 25 j 05:51	17° B 50'32	-1.3m
desc. node	-2002 Dec 01 j 07:29	2° M 35'06		min. Earth dist.		-1996 Jan 28 j 07:45	16° B 38'19	0.64997 AU
	-2001 Jan 06 j 03:13	0° A		direct		-1996 Mar 05 j 19:42	8° B 07'10	
	-2001 Feb 13 j 20:59	0° B				-1996 May 15 j 01:44	0° Q	
	-2001 Mar 24 j 23:56	0° \approx				-1996 Jul 05 j 05:14	0° M	
	-2001 May 04 j 14:03	0° H		desc. node		-1996 Jul 23 j 03:32	11° M 54'01	
	-2001 Jun 17 j 06:16	0° Y				-1996 Aug 18 j 00:05	0° A	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 41

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-1996 Sep 27 j 09:02	0°♌		max. Earth dist.	-1991 Jun 20 j 16:03	10°♊13'46	2.67062 AU
	-1996 Nov 05 j 01:00	0°♏			-1991 Jul 21 j 16:21	0°♐	
	-1996 Dec 13 j 05:51	0°♑		morning rise	-1991 Aug 03 j 10:26	8°♑08'37	
evening set	-1995 Jan 19 j 07:04	28°♑41'06			-1991 Sep 06 j 12:04	0°♒	
	-1995 Jan 21 j 00:26	0°♒			-1991 Oct 22 j 18:59	0°♓	
	-1995 Mar 02 j 04:21	0°♈			-1991 Dec 07 j 15:30	0°♎	
					-1990 Jan 22 j 14:19	0°♌	
conjunction	-1995 Mar 22 j 07:15	14°♈31'29	0°-37'-54		-1990 Mar 11 j 02:47	0°♏	
minimum elong	-1995 Mar 22 j 09:22	14°♈35'15	0°37'54	desc. node	-1990 Mar 15 j 01:47	2°♏22'57	
	-1995 Apr 13 j 06:43	0°♐			-1990 May 07 j 15:38	0°♑	
max. Earth dist.	-1995 Apr 28 j 09:06	10°♐24'14	2.53279 AU	retrograde	-1990 Jun 11 j 18:34	7°♑22'46	
morning rise	-1995 May 18 j 00:59	23°♐41'27		min. Earth dist.	-1990 Jul 09 j 13:50	2°♑51'56	0.37994 AU
asc. node	-1995 May 27 j 09:28	29°♐54'55		opposition	-1990 Jul 12 j 22:16	1°♑57'08	-6°-37'-38
	-1995 May 27 j 12:32	0°♑		greatest brilliancy	-1990 Jul 12 j 00:05	2°♑12'16	-2.8m
	-1995 Jul 12 j 20:50	0°♒			-1990 Jul 20 j 08:34	30°♒♏	
	-1995 Aug 30 j 09:56	0°♓		direct	-1990 Aug 11 j 13:29	26°♒57'23	
	-1995 Oct 21 j 13:39	0°♎			-1990 Sep 02 j 17:33	0°♑	
	-1995 Dec 28 j 04:05	0°♓			-1990 Nov 06 j 08:29	0°♒	
retrograde	-1994 Jan 26 j 13:10	4°♓36'25			-1990 Dec 25 j 11:34	0°♈	
	-1994 Feb 22 j 18:59	30°♒♎		asc. node	-1989 Jan 17 j 05:49	14°♈21'56	
opposition	-1994 Mar 04 j 03:40	26°♒43'25	4°07'42		-1989 Feb 10 j 22:09	0°♐	
greatest brilliancy	-1994 Mar 05 j 15:54	26°♒09'56	-1.7m		-1989 Mar 30 j 10:20	0°♑	
min. Earth dist.	-1994 Mar 11 j 14:06	23°♒59'01	0.56259 AU		-1989 May 17 j 02:55	0°♒	
direct	-1994 Apr 13 j 07:18	17°♒14'26		evening set	-1989 Jun 09 j 22:55	15°♒02'40	
	-1994 Jun 01 j 00:47	0°♓			-1989 Jul 03 j 11:34	0°♓	
desc. node	-1994 Jun 10 j 02:56	4°♓23'17		max. Earth dist.	-1989 Jul 14 j 11:00	7°♓01'35	2.65900 AU
	-1994 Jul 23 j 11:18	0°♎					
	-1994 Sep 04 j 06:49	0°♌		conjunction	-1989 Jul 26 j 04:10	14°♓34'17	1°10'19
	-1994 Oct 14 j 02:22	0°♏		minimum elong	-1989 Jul 26 j 04:00	14°♓34'00	1°10'22
	-1994 Nov 22 j 02:18	0°♑			-1989 Aug 18 j 21:15	0°♒	
	-1994 Dec 31 j 14:06	0°♒		morning rise	-1989 Sep 09 j 06:35	14°♒07'42	
evening set	-1993 Feb 10 j 10:36	0°♈			-1989 Oct 02 j 21:45	0°♓	
	-1993 Mar 18 j 14:12	25°♈28'54			-1989 Nov 15 j 10:45	0°♎	
	-1993 Mar 25 j 03:38	0°♐			-1989 Dec 27 j 16:18	0°♌	
asc. node	-1993 Apr 14 j 07:41	13°♐42'43		desc. node	-1988 Jan 31 j 01:25	24°♌56'49	
	-1993 May 08 j 18:34	0°♑			-1988 Feb 06 j 23:19	0°♏	
					-1988 Mar 19 j 00:58	0°♑	
conjunction	-1993 May 10 j 17:43	1°♑17'41	0°15'17		-1988 Apr 30 j 10:31	0°♒	
minimum elong	-1993 May 10 j 17:03	1°♑16'35	0°15'17		-1988 Jun 18 j 00:06	0°♈	
behind sun begin	-1993 May 10 j 11:55	1°♑08'08		retrograde	-1988 Aug 11 j 13:59	16°♈57'02	
behind sun end	-1993 May 10 j 22:11	1°♑25'01		min. Earth dist.	-1988 Sep 09 j 15:25	11°♈10'17	0.48314 AU
max. Earth dist.	-1993 May 28 j 09:33	12°♑50'48	2.62797 AU	greatest brilliancy	-1988 Sep 16 j 06:22	8°♈47'10	-2.2m
	-1993 Jun 23 j 23:39	0°♒		opposition	-1988 Sep 17 j 16:12	8°♈16'36	-3°-42'-27
morning rise	-1993 Jun 28 j 18:14	3°♒03'16		direct	-1988 Oct 21 j 02:51	1°♈14'08	
	-1993 Aug 10 j 07:01	0°♓		asc. node	-1988 Dec 04 j 04:27	11°♈19'19	
	-1993 Sep 27 j 11:00	0°♎			-1987 Jan 12 j 20:41	0°♐	
	-1993 Nov 16 j 01:21	0°♓			-1987 Mar 07 j 10:07	0°♑	
	-1992 Jan 09 j 02:05	0°♎			-1987 Apr 26 j 14:51	0°♒	
retrograde	-1992 Mar 24 j 10:33	23°♎58'53			-1987 Jun 14 j 00:27	0°♓	
opposition	-1992 Apr 25 j 23:29	17°♎58'43	0°04'07	evening set	-1987 Jul 17 j 00:30	21°♎07'44	
greatest brilliancy	-1993 Dec 02 j 10:49	9°♓32'11	-4.0m		-1987 Jul 30 j 14:00	0°♒	
desc. node	-1992 Apr 27 j 01:43	17°♎38'09		max. Earth dist.	-1987 Aug 08 j 03:01	5°♒38'55	2.59454 AU
min. Earth dist.	-1992 May 03 j 17:05	15°♎34'14	0.43375 AU				
direct	-1992 May 31 j 05:46	10°♎47'02		conjunction	-1987 Sep 02 j 03:35	22°♒29'02	0°57'56
	-1992 Jul 29 j 08:44	0°♌		minimum elong	-1987 Sep 02 j 04:54	22°♒31'16	0°57'57
	-1992 Sep 14 j 19:49	0°♏			-1987 Sep 13 j 02:43	0°♓	
	-1992 Oct 27 j 04:50	0°♑		morning rise	-1987 Oct 20 j 12:37	26°♓19'26	
	-1992 Dec 07 j 22:03	0°♒			-1987 Oct 25 j 15:15	0°♎	
	-1991 Jan 19 j 11:17	0°♈			-1987 Dec 05 j 10:54	0°♌	
asc. node	-1991 Mar 01 j 07:08	27°♈51'52		desc. node	-1987 Dec 17 j 23:45	9°♌24'55	
	-1991 Mar 04 j 11:36	0°♐			-1986 Jan 14 j 01:48	0°♏	
	-1991 Apr 19 j 00:16	0°♑			-1986 Feb 22 j 04:22	0°♑	
evening set	-1991 May 01 j 19:38	8°♑17'34			-1986 Apr 02 j 16:41	0°♒	
	-1991 Jun 04 j 15:23	0°♒			-1986 May 13 j 21:40	0°♈	
					-1986 Jun 28 j 06:01	0°♐	
conjunction	-1991 Jun 18 j 22:39	9°♒07'46	0°54'19		-1986 Aug 29 j 12:03	0°♑	
minimum elong	-1991 Jun 18 j 21:24	9°♒05'46	0°54'22	retrograde	-1986 Sep 23 j 14:45	3°♑54'34	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 42

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-1986 Oct 17 j 05:39	30° RY		desc. node	-1981 Aug 09 j 20:10	17° M 34'20	
asc. node	-1986 Oct 22 j 03:57	28° Y 18'38			-1981 Aug 27 j 05:04	0° L	
min. Earth dist.	-1986 Oct 27 j 23:10	26° Y 06'25	0.59989 AU		-1981 Oct 06 j 07:30	0° M	
opposition	-1986 Nov 02 j 05:23	24° Y 01'21	0°27'57		-1981 Nov 13 j 20:30	0° J	
greatest brilliancy	-1986 Nov 02 j 01:50	24° Y 04'52	-1.6m	greatest brilliancy	-1981 Nov 27 j 21:19	11° J 03'22	1.2m
direct	-1986 Dec 09 j 15:40	15° Y 20'22			-1981 Dec 21 j 22:43	0° Z	
	-1985 Feb 04 j 03:14	0° B		evening set	-1981 Dec 24 j 05:17	1° Z 47'03	
	-1985 Apr 04 j 07:40	0° II			-1980 Jan 29 j 13:56	0° \approx	
	-1985 May 25 j 10:17	0° S					
	-1985 Jul 11 j 21:29	0° Q		conjunction	-1980 Feb 27 j 14:03	21° \approx 53'10	0°-56'-1
	-1985 Aug 25 j 11:28	0° M		minimum elong	-1980 Feb 27 j 16:33	21° \approx 57'48	0°56'03
evening set	-1985 Aug 27 j 15:34	1° M 30'26			-1980 Mar 09 j 13:50	0° H	
max. Earth dist.	-1985 Sep 11 j 11:00	11° M 54'31	2.48465 AU	max. Earth dist.	-1980 Apr 12 j 19:57	24° H 37'09	2.48285 AU
	-1985 Oct 06 j 13:43	0° L			-1980 Apr 20 j 12:18	0° Y	
				morning rise	-1980 Apr 28 j 18:46	5° Y 44'05	
conjunction	-1985 Oct 18 j 14:58	8° L 52'36	0°11'36		-1980 Jun 03 j 16:47	0° B	
minimum elong	-1985 Oct 18 j 15:37	8° L 53'49	0°11'35	asc. node	-1980 Jun 13 j 01:13	6° B 09'12	
behind sun begin	-1985 Oct 17 j 23:07	8° L 23'15			-1980 Jul 20 j 06:40	0° II	
behind sun end	-1985 Oct 19 j 08:07	9° L 24'25			-1980 Sep 07 j 19:50	0° S	
desc. node	-1985 Nov 04 j 23:21	21° L 51'39			-1980 Nov 02 j 21:09	0° Q	
	-1985 Nov 15 j 16:54	0° M		retrograde	-1979 Jan 09 j 00:31	19° Q 24'22	
morning rise	-1985 Dec 15 j 11:25	22° M 55'53		opposition	-1979 Feb 15 j 17:09	11° Q 00'27	4°38'20
	-1985 Dec 24 j 13:21	0° J		greatest brilliancy	-1979 Feb 17 j 00:24	10° Q 30'44	-1.5m
	-1984 Jan 31 j 22:10	0° Z		min. Earth dist.	-1979 Feb 21 j 20:38	8° Q 40'26	0.60378 AU
	-1984 Mar 10 j 16:22	0° \approx		direct	-1979 Mar 28 j 15:01	1° Q 10'45	
	-1984 Apr 19 j 18:15	0° H			-1979 Jun 17 j 08:53	0° M	
	-1984 Jun 01 j 05:14	0° Y		desc. node	-1979 Jun 26 j 18:49	5° M 34'32	
	-1984 Jul 17 j 18:59	0° B			-1979 Aug 03 j 04:39	0° L	
asc. node	-1984 Sep 08 j 03:27	27° B 47'48			-1979 Sep 13 j 14:35	0° M	
	-1984 Sep 13 j 08:46	0° II			-1979 Oct 22 j 19:02	0° J	
retrograde	-1984 Oct 28 j 11:34	10° II 32'31			-1979 Nov 30 j 08:47	0° Z	
min. Earth dist.	-1984 Dec 06 j 02:14	1° II 18'06	0.66520 AU		-1978 Jan 08 j 11:38	0° \approx	
opposition	-1984 Dec 07 j 14:45	0° II 41'28	3°08'25		-1978 Feb 17 j 23:47	0° H	
greatest brilliancy	-1984 Dec 07 j 07:41	0° II 48'34	-1.3m	evening set	-1978 Feb 25 j 19:08	5° H 37'58	
	-1984 Dec 09 j 08:09	30° RB			-1978 Apr 01 j 09:16	0° Y	
direct	-1983 Jan 16 j 14:16	21° B 06'31					
	-1983 Feb 28 j 02:39	0° II		conjunction	-1978 Apr 23 j 00:19	14° Y 46'33	0°-4'-46
	-1983 May 01 j 16:32	0° S		minimum elong	-1978 Apr 23 j 00:33	14° Y 46'57	0°04'46
	-1983 Jun 20 j 20:40	0° Q		behind sun begin	-1978 Apr 22 j 03:06	14° Y 10'43	
	-1983 Aug 05 j 05:42	0° M		behind sun end	-1978 Apr 23 j 22:01	15° Y 23'10	
	-1983 Sep 16 j 09:19	0° L		asc. node	-1978 May 01 j 00:23	20° Y 09'47	
desc. node	-1983 Sep 21 j 22:15	4° L 04'54			-1978 May 15 j 18:55	0° B	
evening set	-1983 Oct 17 j 15:14	23° L 23'36		max. Earth dist.	-1978 May 17 j 18:01	1° B 17'52	2.59652 AU
	-1983 Oct 26 j 06:27	0° M		morning rise	-1978 Jun 13 j 11:21	18° B 45'31	
	-1983 Dec 03 j 18:45	0° J			-1978 Jun 30 j 22:57	0° II	
max. Earth dist.	-1983 Dec 11 j 21:34	6° J 23'35	2.37432 AU		-1978 Aug 17 j 13:39	0° S	
					-1978 Oct 05 j 17:58	0° Q	
conjunction	-1983 Dec 18 j 20:34	11° J 52'50	0°-53'-10		-1978 Nov 27 j 06:00	0° M	
minimum elong	-1983 Dec 18 j 17:36	11° J 46'58	0°53'12		-1977 Feb 06 j 06:27	0° L	
	-1982 Jan 10 j 20:22	0° Z		retrograde	-1977 Feb 28 j 03:59	2° L 40'16	
	-1982 Feb 18 j 09:13	0° \approx			-1977 Mar 20 j 19:04	30° RM	
morning rise	-1982 Feb 25 j 21:56	5° \approx 45'47		opposition	-1977 Apr 03 j 10:30	25° M 50'27	2°15'21
	-1982 Mar 30 j 05:29	0° H		greatest brilliancy	-1977 Apr 04 j 13:50	25° M 27'07	-2.2m
	-1982 May 11 j 02:26	0° Y		min. Earth dist.	-1977 Apr 11 j 22:13	22° M 57'06	0.48495 AU
	-1982 Jun 24 j 16:21	0° B		direct	-1977 May 11 j 05:35	17° M 27'30	
asc. node	-1982 Jul 27 j 01:56	20° B 25'08		desc. node	-1977 May 14 j 18:33	17° M 32'44	
	-1982 Aug 12 j 02:20	0° II			-1977 Jun 26 j 23:29	0° L	
	-1982 Oct 08 j 11:16	0° S			-1977 Aug 16 j 19:46	0° M	
retrograde	-1982 Dec 02 j 07:23	14° S 06'55			-1977 Sep 28 j 02:48	0° J	
opposition	-1981 Jan 10 j 18:52	4° S 47'27	4°33'51		-1977 Nov 07 j 11:32	0° Z	
greatest brilliancy	-1981 Jan 11 j 04:26	4° S 37'59	-1.3m		-1977 Dec 17 j 23:17	0° \approx	
min. Earth dist.	-1981 Jan 13 j 02:50	3° S 52'08	0.66702 AU		-1976 Jan 28 j 15:29	0° H	
	-1981 Jan 23 j 09:26	30° RII			-1976 Mar 12 j 00:13	0° Y	
direct	-1981 Feb 21 j 00:37	24° II 47'43		asc. node	-1976 Mar 17 j 22:30	4° Y 00'26	
	-1981 Mar 24 j 04:41	0° S		evening set	-1976 Apr 15 j 06:36	22° Y 53'36	
	-1981 May 27 j 23:37	0° Q			-1976 Apr 26 j 02:17	0° B	
	-1981 Jul 15 j 04:52	0° M					

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 43

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

conjunction	-1976 Jun 03 j 22:29	25°♄09'28	0°41'38			-1971 Jul 12 j 18:51	0°♃	
minimum elong	-1976 Jun 03 j 21:12	25°♄07'23	0°41'39	retrograde		-1971 Sep 08 j 05:45	17°♃40'26	
	-1976 Jun 11 j 11:45	0°♂		min. Earth dist.		-1971 Oct 10 j 14:23	10°♃35'20	0.55898 AU
max. Earth dist.	-1976 Jun 11 j 12:52	0°♂01'47	2.66040 AU	opposition		-1971 Oct 17 j 04:37	8°♃01'51	0°-58'-8
morning rise	-1976 Jul 20 j 10:05	24°♂49'38		greatest brilliancy		-1971 Oct 16 j 20:31	8°♃09'43	-1.8m
	-1976 Jul 28 j 13:17	0°♄		asc. node		-1971 Nov 07 j 18:26	1°♃16'35	
	-1976 Sep 13 j 17:56	0°♂				-1971 Nov 17 j 21:42	30°♂	
	-1976 Oct 30 j 22:22	0°♎		direct		-1971 Nov 22 j 06:16	29°♂52'33	
	-1976 Dec 17 j 14:21	0°♁				-1971 Nov 26 j 16:16	0°♃	
	-1975 Feb 05 j 09:45	0°♌				-1970 Feb 18 j 07:15	0°♄	
desc. node	-1975 Mar 31 j 17:38	27°♌20'28				-1970 Apr 13 j 05:20	0°♂	
	-1975 Apr 07 j 22:35	0°♂				-1970 Jun 01 j 23:04	0°♄	
retrograde	-1975 May 11 j 05:47	6°♂15'24				-1970 Jul 18 j 23:37	0°♂	
opposition	-1975 Jun 10 j 13:28	1°♂14'18	-4°-42'-6	evening set		-1970 Aug 10 j 16:09	15°♂05'00	
greatest brilliancy	-1975 Jun 10 j 23:16	1°♂07'43	-2.8m	max. Earth dist.		-1970 Aug 27 j 08:16	26°♂26'15	2.53239 AU
min. Earth dist.	-1975 Jun 12 j 17:39	0°♂39'15	0.37962 AU			-1970 Sep 01 j 12:09	0°♎	
	-1975 Jun 15 j 04:40	30°♌						
direct	-1975 Jul 11 j 09:22	25°♌58'56		conjunction		-1970 Sep 29 j 02:37	19°♎26'11	0°33'45
	-1975 Aug 05 j 11:15	0°♂		minimum elong		-1970 Sep 29 j 04:04	19°♎28'45	0°33'43
	-1975 Oct 05 j 00:06	0°♄				-1970 Oct 13 j 17:51	0°♁	
	-1975 Nov 20 j 15:52	0°≈		morning rise		-1970 Nov 21 j 06:40	28°♁36'50	
	-1974 Jan 04 j 19:35	0°♂		desc. node		-1970 Nov 21 j 16:22	28°♁55'11	
asc. node	-1974 Feb 02 j 21:04	19°♂11'00				-1970 Nov 23 j 02:38	0°♌	
	-1974 Feb 19 j 10:03	0°♃				-1969 Jan 01 j 05:13	0°♂	
	-1974 Apr 06 j 22:34	0°♄				-1969 Feb 08 j 19:26	0°♄	
	-1974 May 24 j 02:41	0°♂				-1969 Mar 19 j 18:10	0°≈	
evening set	-1974 May 26 j 03:02	1°♂16'40				-1969 Apr 29 j 01:52	0°♂	
max. Earth dist.	-1974 Jul 05 j 02:53	26°♂42'02	2.67006 AU			-1969 Jun 11 j 02:41	0°♃	
	-1974 Jul 10 j 06:51	0°♄				-1969 Jul 29 j 18:07	0°♄	
				asc. node		-1969 Sep 25 j 17:54	24°♄40'45	
conjunction	-1974 Jul 11 j 18:02	0°♄56'13	1°07'10	retrograde		-1969 Oct 15 j 23:30	27°♄10'17	
minimum elong	-1974 Jul 11 j 17:19	0°♄55'04	1°07'14	min. Earth dist.		-1969 Nov 22 j 01:11	18°♄26'00	0.64686 AU
morning rise	-1974 Aug 25 j 15:05	29°♄53'47		opposition		-1969 Nov 25 j 01:23	17°♄13'33	2°16'07
	-1974 Aug 25 j 18:54	0°♂		greatest brilliancy		-1969 Nov 24 j 16:03	17°♄22'55	-1.4m
	-1974 Oct 10 j 04:26	0°♎		direct		-1968 Jan 03 j 04:21	7°♄55'43	
	-1974 Nov 23 j 09:38	0°♁				-1968 Mar 16 j 07:20	0°♂	
	-1973 Jan 05 j 14:34	0°♌				-1968 May 10 j 20:10	0°♄	
desc. node	-1973 Feb 16 j 17:32	29°♌39'03				-1968 Jun 28 j 14:55	0°♂	
	-1973 Feb 17 j 05:25	0°♂				-1968 Aug 12 j 14:10	0°♎	
	-1973 Apr 01 j 06:24	0°♄				-1968 Sep 23 j 16:20	0°♁	
	-1973 May 18 j 01:09	0°≈		evening set		-1968 Sep 25 j 15:18	1°♁26'15	
retrograde	-1973 Jul 22 j 17:01	23°≈14'18		desc. node		-1968 Oct 08 j 14:32	11°♁03'06	
min. Earth dist.	-1973 Aug 18 j 22:50	18°≈16'55	0.43344 AU	max. Earth dist.		-1968 Oct 17 j 00:19	17°♁21'44	2.40807 AU
greatest brilliancy	-1973 Aug 24 j 20:56	16°≈20'07	-2.5m			-1968 Nov 02 j 15:08	0°♌	
opposition	-1973 Aug 26 j 17:45	15°≈42'59	-5°-31'-28					
direct	-1973 Sep 27 j 08:44	9°≈33'58		conjunction		-1968 Nov 22 j 08:18	15°♌13'38	0°-29'-47
	-1973 Dec 02 j 12:38	0°♂		minimum elong		-1968 Nov 22 j 06:12	15°♌09'33	0°29'49
asc. node	-1973 Dec 21 j 20:01	10°♂04'10				-1968 Dec 11 j 06:00	0°♂	
	-1972 Jan 25 j 23:49	0°♃				-1967 Jan 18 j 09:43	0°♄	
	-1972 Mar 16 j 04:03	0°♄		morning rise		-1967 Jan 27 j 10:50	7°♄05'28	
	-1972 May 04 j 02:31	0°♂				-1967 Feb 25 j 23:36	0°≈	
	-1972 Jun 20 j 23:57	0°♄				-1967 Apr 06 j 20:26	0°♂	
evening set	-1972 Jul 02 j 01:39	7°♄03'14				-1967 May 18 j 19:42	0°♃	
max. Earth dist.	-1972 Jul 28 j 16:30	24°♄15'16	2.62604 AU			-1967 Jul 02 j 19:52	0°♄	
	-1972 Aug 06 j 10:54	0°♂		asc. node		-1967 Aug 12 j 18:23	24°♄51'19	
						-1967 Aug 21 j 22:26	0°♂	
conjunction	-1972 Aug 17 j 10:50	7°♂16'17	1°06'30			-1967 Nov 03 j 19:45	0°♄	
minimum elong	-1972 Aug 17 j 11:38	7°♂17'37	1°06'33	retrograde		-1967 Nov 18 j 14:32	1°♄18'09	
	-1972 Sep 20 j 03:07	0°♎				-1967 Dec 02 j 17:27	30°♌	
morning rise	-1972 Oct 02 j 23:25	8°♎51'47		opposition		-1967 Dec 28 j 11:11	21°♂43'46	4°09'14
	-1972 Nov 01 j 23:37	0°♁		greatest brilliancy		-1967 Dec 28 j 12:54	21°♂42'03	-1.2m
	-1972 Dec 13 j 05:49	0°♌		min. Earth dist.		-1967 Dec 29 j 06:48	21°♂24'13	0.67398 AU
desc. node	-1971 Jan 03 j 17:44	15°♌59'56		direct		-1966 Feb 07 j 08:59	11°♂50'25	
	-1971 Jan 22 j 08:26	0°♂				-1966 Apr 12 j 15:32	0°♄	
	-1971 Mar 02 j 23:09	0°♄				-1966 Jun 06 j 18:52	0°♂	
	-1971 Apr 12 j 02:09	0°≈				-1966 Jul 23 j 11:25	0°♎	
	-1971 May 24 j 10:51	0°♂		desc. node		-1966 Aug 26 j 13:06	23°♎50'25	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 44

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-1966 Sep 04 j 00:43	0°♄		max. Earth dist.	-1961 Jun 03 j 03:54	19°♄34'34	2.64180 AU
	-1966 Oct 13 j 23:38	0°♍			-1961 Jun 19 j 08:40	0°♊	
	-1966 Nov 21 j 11:18	0°♋		morning rise	-1961 Jul 07 j 03:19	11°♊21'18	
evening set	-1966 Nov 26 j 14:39	4°♋03'00			-1961 Aug 05 j 13:02	0°♎	
	-1966 Dec 29 j 12:18	0°♏			-1961 Sep 22 j 06:54	0°♏	
					-1961 Nov 09 j 19:26	0°♐	
conjunction	-1965 Feb 01 j 02:10	26°♏10'36	-1°-5'-51		-1961 Dec 30 j 15:12	0°♑	
minimum elong	-1965 Feb 01 j 02:57	26°♏12'07	1°05'54		-1960 Mar 01 j 01:23	0°♍	
	-1965 Feb 06 j 01:29	0°♎		retrograde	-1960 Apr 09 j 14:55	8°♍11'57	
	-1965 Mar 17 j 22:47	0°♈		desc. node	-1960 Apr 17 j 11:04	7°♍49'12	
max. Earth dist.	-1965 Mar 23 j 13:05	4°♈06'08	2.43003 AU	opposition	-1960 May 11 j 04:03	2°♍39'48	-1°-34'-7
morning rise	-1965 Apr 07 j 20:25	15°♈10'56		greatest brilliancy	-1960 May 11 j 16:54	2°♍30'22	-2.7m
	-1965 Apr 28 j 19:08	0°♉		min. Earth dist.	-1960 May 17 j 16:18	0°♍45'45	0.40868 AU
	-1965 Jun 12 j 00:33	0°♊			-1960 May 20 j 09:39	30°♊	
asc. node	-1965 Jun 30 j 17:04	12°♊09'54		direct	-1960 Jun 13 j 17:13	26°♊14'37	
	-1965 Jul 29 j 00:42	0°♋			-1960 Jul 07 j 18:29	0°♍	
	-1965 Sep 18 j 05:15	0°♎			-1960 Sep 05 j 06:23	0°♋	
	-1965 Nov 23 j 08:13	0°♏			-1960 Oct 19 j 22:22	0°♏	
retrograde	-1965 Dec 25 j 03:26	5°♏20'31			-1960 Dec 01 j 17:46	0°♎	
	-1964 Jan 23 j 08:03	30°♊			-1959 Jan 13 j 23:09	0°♈	
opposition	-1964 Feb 01 j 16:29	26°♎31'26	4°48'14	asc. node	-1959 Feb 19 j 12:35	24°♈44'24	
greatest brilliancy	-1964 Feb 02 j 15:42	26°♎08'55	-1.4m		-1959 Feb 27 j 10:04	0°♉	
min. Earth dist.	-1964 Feb 06 j 08:54	24°♎42'29	0.63617 AU		-1959 Apr 14 j 05:41	0°♊	
direct	-1964 Mar 13 j 22:59	16°♎32'04		evening set	-1959 May 10 j 20:58	17°♊07'51	
	-1964 May 05 j 04:00	0°♏			-1959 May 31 j 00:28	0°♊	
	-1964 Jun 28 j 21:31	0°♐		max. Earth dist.	-1959 Jun 25 j 23:20	16°♊32'04	2.67283 AU
desc. node	-1964 Jul 13 j 11:54	9°♐23'53					
	-1964 Aug 12 j 12:25	0°♑		conjunction	-1959 Jun 27 j 07:53	17°♊23'54	1°00'07
	-1964 Sep 22 j 04:57	0°♍		minimum elong	-1959 Jun 27 j 06:46	17°♊22'07	1°00'09
	-1964 Oct 31 j 00:47	0°♋			-1959 Jul 17 j 02:07	0°♎	
	-1964 Dec 08 j 08:06	0°♏		morning rise	-1959 Aug 11 j 11:02	16°♎15'07	
	-1963 Jan 16 j 04:32	0°♎			-1959 Sep 01 j 18:34	0°♏	
evening set	-1963 Feb 02 j 13:19	13°♎06'12			-1959 Oct 17 j 16:54	0°♐	
	-1963 Feb 25 j 10:12	0°♈			-1959 Dec 01 j 21:08	0°♑	
					-1958 Jan 15 j 14:24	0°♍	
conjunction	-1963 Apr 03 j 10:29	26°♈25'14	0°-25'-57		-1958 Mar 01 j 15:29	0°♋	
minimum elong	-1963 Apr 03 j 11:56	26°♈27'46	0°25'57	desc. node	-1958 Mar 05 j 11:07	2°♋29'57	
	-1963 Apr 08 j 13:48	0°♉			-1958 Apr 18 j 16:46	0°♏	
max. Earth dist.	-1963 May 05 j 22:52	18°♉43'36	2.55742 AU	retrograde	-1958 Jun 27 j 22:10	25°♏05'26	
asc. node	-1963 May 17 j 15:33	26°♉33'46		min. Earth dist.	-1958 Jul 24 j 15:01	20°♏38'28	0.39292 AU
	-1963 May 22 j 19:45	0°♊		greatest brilliancy	-1958 Jul 28 j 17:23	19°♏27'32	-2.7m
morning rise	-1963 May 28 j 01:47	3°♊28'17		opposition	-1958 Jul 30 j 06:08	19°♏00'47	-6°-42'-27
	-1963 Jul 08 j 01:04	0°♋		direct	-1958 Aug 29 j 08:40	13°♏44'03	
	-1963 Aug 25 j 03:45	0°♎			-1958 Oct 24 j 18:29	0°♎	
	-1963 Oct 14 j 21:47	0°♏			-1958 Dec 17 j 23:26	0°♈	
	-1963 Dec 12 j 09:56	0°♐		asc. node	-1957 Jan 07 j 10:51	12°♈23'25	
retrograde	-1962 Feb 06 j 14:01	14°♐27'19			-1957 Feb 05 j 00:36	0°♉	
opposition	-1962 Mar 14 j 10:09	6°♐54'50	3°37'12		-1957 Mar 25 j 06:36	0°♊	
greatest brilliancy	-1962 Mar 15 j 22:23	6°♐22'05	-1.9m		-1957 May 12 j 08:10	0°♋	
min. Earth dist.	-1962 Mar 22 j 09:56	4°♐01'59	0.53610 AU	evening set	-1957 Jun 18 j 09:28	23°♊20'13	
	-1962 Apr 04 j 14:12	30°♊			-1957 Jun 28 j 20:59	0°♎	
direct	-1962 Apr 22 j 21:52	27°♊43'55		max. Earth dist.	-1957 Jul 19 j 23:18	13°♎31'27	2.64952 AU
	-1962 May 11 j 18:34	0°♐					
desc. node	-1962 May 31 j 10:32	6°♐18'40		conjunction	-1957 Aug 03 j 13:00	22°♎58'13	1°10'13
	-1962 Jul 15 j 11:51	0°♑		minimum elong	-1957 Aug 03 j 13:11	22°♎58'30	1°10'16
	-1962 Aug 28 j 20:50	0°♍			-1957 Aug 14 j 07:03	0°♏	
	-1962 Oct 08 j 07:17	0°♋		morning rise	-1957 Sep 17 j 23:20	23°♏04'35	
	-1962 Nov 16 j 16:08	0°♏			-1957 Sep 28 j 04:29	0°♐	
	-1962 Dec 26 j 10:24	0°♎			-1957 Nov 10 j 11:17	0°♑	
	-1961 Feb 05 j 12:19	0°♈			-1957 Dec 22 j 07:36	0°♍	
	-1961 Mar 20 j 09:26	0°♉		desc. node	-1956 Jan 21 j 09:56	22°♍04'39	
evening set	-1961 Mar 29 j 11:00	6°♉10'35			-1956 Feb 01 j 02:53	0°♋	
asc. node	-1961 Apr 04 j 14:49	10°♉20'30			-1956 Mar 12 j 12:58	0°♏	
	-1961 May 04 j 03:07	0°♊			-1956 Apr 22 j 19:19	0°♎	
					-1956 Jun 06 j 19:06	0°♈	
conjunction	-1961 May 20 j 04:23	10°♊30'39	0°25'44	retrograde	-1956 Aug 22 j 05:01	29°♈08'16	
minimum elong	-1961 May 20 j 03:23	10°♊29'00	0°25'45	min. Earth dist.	-1956 Sep 21 j 10:06	22°♈52'47	0.51106 AU

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 45

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

greatest brilliancy	-1956 Sep 28 j 02:07	20° K 23'51	-2.0m			-1951 Sep 11 j 13:45	0° L	
opposition	-1956 Sep 29 j 02:18	20° K 01'17	-2°-39'-35	desc. node		-1951 Sep 12 j 05:36	0° L 29'03	
direct	-1956 Nov 02 j 13:14	12° K 32'32				-1951 Oct 21 j 11:43	0° M	
asc. node	-1956 Nov 24 j 10:44	15° K 22'09		evening set		-1951 Oct 31 j 09:13	7° M 38'04	
	-1955 Jan 03 j 00:52	0° Y				-1951 Nov 28 j 23:55	0° X	
	-1955 Mar 01 j 04:14	0° X						
	-1955 Apr 21 j 09:47	0° II		conjunction		-1950 Jan 03 j 18:46	28° X 12'51	-1°-1'-59
	-1955 Jun 09 j 05:36	0° S		minimum elong		-1950 Jan 03 j 16:37	28° X 08'37	1°02'01
evening set	-1955 Jul 25 j 18:59	29° S 53'12				-1950 Jan 06 j 01:14	0° S	
	-1955 Jul 25 j 23:07	0° L		max. Earth dist.		-1950 Feb 09 j 10:10	26° S 48'22	2.38286 AU
max. Earth dist.	-1955 Aug 14 j 17:26	13° L 07'48	2.57431 AU			-1950 Feb 13 j 13:44	0° \approx	
	-1955 Sep 08 j 12:04	0° M		morning rise		-1950 Mar 13 j 14:22	21° \approx 14'49	
						-1950 Mar 25 j 09:29	0° K	
conjunction	-1955 Sep 11 j 13:06	2° M 06'18	0°50'38			-1950 May 06 j 04:57	0° Y	
minimum elong	-1955 Sep 11 j 14:36	2° M 08'53	0°50'38			-1950 Jun 19 j 13:35	0° X	
	-1955 Oct 20 j 22:26	0° L		asc. node		-1950 Jul 17 j 09:00	17° X 47'49	
morning rise	-1955 Oct 31 j 07:25	7° L 32'47				-1950 Aug 06 j 06:44	0° II	
	-1955 Nov 30 j 14:06	0° M				-1950 Sep 29 j 09:46	0° S	
desc. node	-1955 Dec 08 j 09:02	5° M 52'10		retrograde		-1950 Dec 10 j 09:15	21° S 59'57	
	-1954 Jan 09 j 00:09	0° X		opposition		-1949 Jan 18 j 14:06	12° S 50'13	4°42'44
	-1954 Feb 16 j 21:35	0° S		greatest brilliancy		-1949 Jan 19 j 04:31	12° S 36'03	-1.3m
	-1954 Mar 28 j 03:32	0° \approx		min. Earth dist.		-1949 Jan 21 j 18:25	11° S 35'12	0.65883 AU
	-1954 May 07 j 21:56	0° K		direct		-1949 Feb 28 j 21:56	2° S 48'48	
	-1954 Jun 21 j 01:31	0° Y				-1949 May 20 j 17:59	0° L	
	-1954 Aug 13 j 15:17	0° X				-1949 Jul 09 j 13:02	0° M	
retrograde	-1954 Oct 01 j 23:52	12° X 58'25		desc. node		-1949 Jul 31 j 04:50	14° M 34'39	
asc. node	-1954 Oct 12 j 10:20	12° X 12'52				-1949 Aug 22 j 00:41	0° L	
min. Earth dist.	-1954 Nov 06 j 08:44	4° X 48'35	0.61911 AU			-1949 Oct 01 j 07:23	0° M	
opposition	-1954 Nov 10 j 19:42	3° X 01'51	1°11'29			-1949 Nov 08 j 22:14	0° X	
greatest brilliancy	-1954 Nov 10 j 12:18	3° X 09'15	-1.5m			-1949 Dec 17 j 01:42	0° S	
	-1954 Nov 18 j 15:45	30° R Y		evening set		-1948 Jan 08 j 18:13	17° S 41'34	
direct	-1954 Dec 18 j 21:21	24° Y 06'07				-1948 Jan 24 j 17:58	0° \approx	
	-1953 Jan 21 j 09:52	0° X				-1948 Mar 04 j 19:00	0° K	
	-1953 Mar 28 j 19:39	0° II						
	-1953 May 20 j 03:51	0° S		conjunction		-1948 Mar 12 j 09:48	5° K 33'20	0°-46'-15
	-1953 Jul 07 j 01:22	0° L		minimum elong		-1948 Mar 12 j 12:16	5° K 37'49	0°46'16
	-1953 Aug 20 j 18:54	0° M				-1948 Apr 15 j 18:22	0° Y	
evening set	-1953 Sep 06 j 23:38	12° M 02'45		max. Earth dist.		-1948 Apr 22 j 02:10	4° Y 23'33	2.51125 AU
max. Earth dist.	-1953 Sep 22 j 02:55	22° M 53'02	2.45722 AU	morning rise		-1948 May 10 j 00:51	16° Y 40'30	
	-1953 Oct 01 j 21:44	0° L				-1948 May 29 j 22:06	0° X	
desc. node	-1953 Oct 26 j 07:53	18° L 07'49		asc. node		-1948 Jun 03 j 07:23	2° X 53'59	
						-1948 Jul 15 j 07:13	0° II	
conjunction	-1953 Oct 30 j 17:27	21° L 26'45	0°-3'-1			-1948 Sep 02 j 04:08	0° S	
minimum elong	-1953 Oct 30 j 17:16	21° L 26'25	0°03'02			-1948 Oct 25 j 13:39	0° L	
behind sun begin	-1953 Oct 29 j 17:30	20° L 41'33		retrograde		-1947 Jan 18 j 18:24	28° L 20'45	
behind sun end	-1953 Oct 31 j 17:03	22° L 11'20		opposition		-1947 Feb 24 j 21:13	20° L 13'08	4°23'11
	-1953 Nov 10 j 23:42	0° M		greatest brilliancy		-1947 Feb 26 j 07:44	19° L 40'45	-1.6m
	-1953 Dec 19 j 18:12	0° X		min. Earth dist.		-1947 Mar 03 j 18:23	17° L 38'30	0.58211 AU
morning rise	-1953 Dec 30 j 13:16	8° X 26'57		direct		-1947 Apr 06 j 10:27	10° L 32'58	
greatest brilliancy	-1952 Jan 17 j 20:07	22° X 47'32	1.2m			-1947 Jun 08 j 07:46	0° M	
	-1952 Jan 27 j 00:54	0° S		desc. node		-1947 Jun 17 j 04:34	4° M 47'22	
	-1952 Mar 05 j 16:42	0° \approx				-1947 Jul 27 j 18:16	0° L	
	-1952 Apr 14 j 15:21	0° K				-1947 Sep 07 j 21:59	0° M	
	-1952 May 26 j 19:48	0° Y				-1947 Oct 17 j 10:20	0° X	
	-1952 Jul 11 j 14:15	0° X				-1947 Nov 25 j 05:04	0° S	
asc. node	-1952 Aug 29 j 09:18	27° X 42'45				-1946 Jan 03 j 11:40	0° \approx	
	-1952 Sep 03 j 00:34	0° II				-1946 Feb 13 j 03:04	0° K	
retrograde	-1952 Nov 05 j 04:47	18° II 28'31		evening set		-1946 Mar 09 j 22:04	17° K 39'59	
opposition	-1952 Dec 15 j 06:30	8° II 42'26	3°33'57			-1946 Mar 27 j 15:21	0° Y	
greatest brilliancy	-1952 Dec 15 j 01:58	8° II 46'58	-1.3m	asc. node		-1946 Apr 21 j 05:23	16° Y 44'22	
min. Earth dist.	-1952 Dec 14 j 14:07	8° II 58'51	0.67105 AU					
	-1951 Jan 12 j 02:52	30° R X		conjunction		-1946 May 03 j 08:22	24° Y 51'10	0°07'08
direct	-1951 Jan 24 j 14:57	28° X 59'41		minimum elong		-1946 May 03 j 08:01	24° Y 50'35	0°07'09
	-1951 Feb 06 j 17:39	0° II		behind sun begin		-1946 May 02 j 12:31	24° Y 18'07	
	-1951 Apr 24 j 23:13	0° S		behind sun end		-1946 May 04 j 03:32	25° Y 23'01	
	-1951 Jun 15 j 11:30	0° L				-1946 May 11 j 02:40	0° X	
	-1951 Jul 31 j 06:32	0° M		max. Earth dist.		-1946 May 24 j 01:30	8° X 31'03	2.61501 AU

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 46

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

morning rise	-1946 Jun 22 j 08:37	27°♄29'53		direct	-1941 Oct 11 j 20:24	22°♄43'34	
	-1946 Jun 26 j 06:15	0°♂			-1941 Nov 17 j 05:02	0°♂	
	-1946 Aug 12 j 15:57	0°♄		asc. node	-1941 Dec 12 j 01:42	10°♂27'41	
	-1946 Sep 30 j 04:48	0°♂			-1940 Jan 18 j 15:38	0°♂	
	-1946 Nov 19 j 19:29	0°♂			-1940 Mar 10 j 12:17	0°♂	
	-1945 Jan 16 j 16:09	0°♂			-1940 Apr 29 j 02:52	0°♂	
retrograde	-1945 Mar 13 j 21:38	14°♂42'47			-1940 Jun 16 j 07:27	0°♄	
opposition	-1945 Apr 16 j 05:55	8°♂19'38	1°07'04	evening set	-1940 Jul 10 j 14:28	15°♄30'39	
greatest brilliancy	-1945 Apr 16 j 20:26	8°♂07'45	-2.3m		-1940 Aug 01 j 20:32	0°♂	
min. Earth dist.	-1945 Apr 24 j 12:22	5°♂38'11	0.45620 AU	max. Earth dist.	-1940 Aug 03 j 17:34	1°♂14'07	2.60953 AU
desc. node	-1945 May 05 j 03:13	2°♂40'46					
direct	-1945 May 22 j 17:12	0°♂33'21		conjunction	-1940 Aug 26 j 07:56	16°♂17'12	1°02'09
	-1945 Aug 07 j 12:05	0°♂		minimum elong	-1940 Aug 26 j 09:03	16°♂19'04	1°02'10
	-1945 Sep 21 j 00:03	0°♂			-1940 Sep 15 j 11:43	0°♂	
	-1945 Nov 01 j 07:29	0°♂		morning rise	-1940 Oct 12 j 18:33	19°♂01'04	
	-1945 Dec 12 j 09:04	0°♂			-1940 Oct 28 j 04:39	0°♂	
	-1944 Jan 23 j 10:51	0°♂			-1940 Dec 08 j 05:37	0°♂	
	-1944 Mar 07 j 02:35	0°♂		desc. node	-1940 Dec 25 j 01:25	12°♂35'03	
asc. node	-1944 Mar 08 j 04:35	0°♂43'50			-1939 Jan 17 j 01:51	0°♂	
	-1944 Apr 21 j 09:14	0°♂			-1939 Feb 25 j 09:30	0°♂	
evening set	-1944 Apr 24 j 21:11	2°♂16'46			-1939 Apr 06 j 02:51	0°♂	
	-1944 Jun 06 j 21:01	0°♂			-1939 May 17 j 16:13	0°♂	
					-1939 Jul 03 j 02:56	0°♂	
conjunction	-1944 Jun 12 j 15:07	3°♂40'46	0°49'26	retrograde	-1939 Sep 17 j 05:24	27°♂35'48	
minimum elong	-1944 Jun 12 j 13:48	3°♂38'40	0°49'27	min. Earth dist.	-1939 Oct 20 j 16:52	20°♂05'49	0.58250 AU
max. Earth dist.	-1944 Jun 16 j 23:50	6°♂27'57	2.66712 AU	opposition	-1939 Oct 26 j 13:21	17°♂47'37	0°-6'-29
	-1944 Jul 23 j 22:01	0°♄		greatest brilliancy	-1938 Mar 06 j 08:54	12°♂19'45	-3.0m
morning rise	-1944 Jul 28 j 11:56	2°♄55'06		asc. node	-1939 Oct 29 j 01:17	16°♂49'01	
	-1944 Sep 08 j 21:28	0°♂		direct	-1939 Dec 02 j 09:13	9°♂19'48	
	-1944 Oct 25 j 13:20	0°♂			-1938 Feb 09 j 21:16	0°♂	
	-1944 Dec 11 j 02:48	0°♂			-1938 Apr 07 j 10:37	0°♂	
	-1943 Jan 27 j 09:33	0°♂			-1938 May 27 j 23:04	0°♄	
	-1943 Mar 19 j 04:50	0°♂			-1938 Jul 14 j 06:34	0°♂	
desc. node	-1943 Mar 22 j 02:44	1°♂33'56		evening set	-1938 Aug 20 j 04:36	24°♂42'18	
retrograde	-1943 May 29 j 06:02	24°♂01'55			-1938 Aug 27 j 21:04	0°♂	
opposition	-1943 Jun 28 j 19:13	18°♂55'42	-6°-3'-25	max. Earth dist.	-1938 Sep 04 j 14:12	5°♂21'57	2.50645 AU
min. Earth dist.	-1943 Jun 27 j 19:52	19°♂11'15	0.37576 AU				
greatest brilliancy	-1943 Jun 28 j 12:23	19°♂00'15	-2.9m	conjunction	-1938 Oct 09 j 22:22	0°♂37'19	0°21'38
direct	-1943 Jul 28 j 15:14	13°♂57'24		minimum elong	-1938 Oct 09 j 23:28	0°♂39'19	0°21'37
	-1943 Sep 21 j 09:40	0°♂			-1938 Oct 09 j 01:54	0°♂	
	-1943 Nov 12 j 12:18	0°♂		desc. node	-1938 Nov 12 j 00:25	25°♂12'25	
	-1943 Dec 29 j 11:31	0°♂			-1938 Nov 18 j 08:17	0°♂	
asc. node	-1942 Jan 24 j 03:11	16°♂34'32		morning rise	-1938 Dec 04 j 13:25	12°♂23'31	
	-1942 Feb 13 j 23:32	0°♂			-1938 Dec 27 j 07:42	0°♂	
	-1942 Apr 01 j 23:42	0°♂			-1937 Feb 03 j 18:50	0°♂	
	-1942 May 19 j 10:04	0°♂			-1937 Mar 14 j 14:21	0°♂	
evening set	-1942 Jun 03 j 16:31	9°♂39'20			-1937 Apr 23 j 17:17	0°♂	
	-1942 Jul 05 j 16:48	0°♄			-1937 Jun 05 j 07:42	0°♂	
max. Earth dist.	-1942 Jul 10 j 13:11	3°♄06'02	2.66498 AU		-1937 Jul 22 j 11:26	0°♂	
				asc. node	-1937 Sep 16 j 00:56	27°♂35'57	
conjunction	-1942 Jul 20 j 00:42	9°♄10'48	1°09'30		-1937 Sep 23 j 00:37	0°♂	
minimum elong	-1942 Jul 20 j 00:17	9°♄10'08	1°09'32	retrograde	-1937 Oct 23 j 19:13	5°♂22'00	
	-1942 Aug 21 j 03:52	0°♂			-1937 Nov 21 j 04:48	30°♂	
morning rise	-1942 Sep 02 j 22:59	8°♂23'58		min. Earth dist.	-1937 Nov 30 j 17:48	26°♂20'19	0.65825 AU
	-1942 Oct 05 j 08:57	0°♂		opposition	-1937 Dec 02 j 21:57	25°♂27'56	2°48'00
	-1942 Nov 18 j 05:27	0°♂		greatest brilliancy	-1937 Dec 02 j 13:25	25°♂36'31	-1.3m
	-1942 Dec 30 j 21:06	0°♂		direct	-1936 Jan 11 j 12:21	16°♂00'04	
desc. node	-1941 Feb 07 j 02:54	27°♂25'19			-1936 Mar 06 j 22:42	0°♂	
	-1941 Feb 10 j 16:45	0°♂			-1936 May 04 j 22:42	0°♄	
	-1941 Mar 24 j 11:10	0°♂			-1936 Jun 23 j 13:04	0°♂	
	-1941 May 07 j 03:08	0°♂			-1936 Aug 07 j 19:13	0°♂	
	-1941 Jun 30 j 12:48	0°♂			-1936 Sep 18 j 23:29	0°♂	
retrograde	-1941 Aug 03 j 23:06	7°♂35'14		desc. node	-1936 Sep 28 j 23:44	7°♂23'11	
min. Earth dist.	-1941 Sep 01 j 02:27	2°♂12'06	0.46032 AU	evening set	-1936 Oct 07 j 17:44	13°♂55'12	
	-1941 Sep 07 j 10:41	30°♂			-1936 Oct 28 j 22:12	0°♂	
greatest brilliancy	-1941 Sep 07 j 13:24	29°♂57'38	-2.3m	max. Earth dist.	-1936 Nov 08 j 11:12	8°♂07'26	2.38517 AU
opposition	-1941 Sep 09 j 05:28	29°♂22'41	-4°-30'-46				

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 47

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

conjunction	-1936 Dec 06 j 23:08	0°♂22'08	0°-43'-57		-1931 Aug 20 j 00:50	0°♂	
minimum elong	-1936 Dec 06 j 20:15	0°♂16'28	0°43'59		-1931 Oct 08 j 18:18	0°♂	
	-1936 Dec 06 j 11:51	0°♂			-1931 Dec 02 j 03:00	0°♂	
	-1935 Jan 13 j 14:11	0°♂		retrograde	-1930 Feb 18 j 09:41	24°♂55'18	
morning rise	-1935 Feb 13 j 05:04	23°♂54'20		opposition	-1930 Mar 25 j 09:42	17°♂45'12	2°55'13
	-1935 Feb 21 j 02:43	0°♂		greatest brilliancy	-1930 Mar 26 j 18:28	17°♂16'22	-2.0m
	-1935 Apr 01 j 21:54	0°♂		min. Earth dist.	-1930 Apr 02 j 18:08	14°♂49'27	0.50835 AU
	-1935 May 13 j 18:13	0°♂		direct	-1930 May 03 j 00:40	8°♂57'48	
	-1935 Jun 27 j 09:55	0°♂		desc. node	-1930 May 21 j 19:59	11°♂15'07	
asc. node	-1935 Aug 02 j 23:23	22°♂45'48			-1930 Jul 05 j 17:08	0°♂	
	-1935 Aug 15 j 07:49	0°♂			-1930 Aug 21 j 20:25	0°♂	
	-1935 Oct 15 j 00:34	0°♂			-1930 Oct 02 j 04:27	0°♂	
retrograde	-1935 Nov 26 j 10:38	9°♂06'27			-1930 Nov 11 j 00:49	0°♂	
	-1934 Jan 04 j 06:29	30°♂♂			-1930 Dec 21 j 03:16	0°♂	
opposition	-1934 Jan 05 j 02:36	29°♂40'03	4°24'46		-1929 Jan 31 j 11:24	0°♂	
greatest brilliancy	-1934 Jan 05 j 08:37	29°♂34'05	-1.2m		-1929 Mar 15 j 13:34	0°♂	
min. Earth dist.	-1934 Jan 06 j 18:39	29°♂00'18	0.67145 AU	asc. node	-1929 Mar 25 j 20:23	6°♂58'38	
direct	-1934 Feb 15 j 05:11	19°♂42'31		evening set	-1929 Apr 08 j 19:31	16°♂20'50	
	-1934 Apr 02 j 00:58	0°♂			-1929 Apr 29 j 10:35	0°♂	
	-1934 May 31 j 14:29	0°♂					
	-1934 Jul 18 j 04:30	0°♂		conjunction	-1929 May 29 j 07:40	19°♂26'45	0°35'20
desc. node	-1934 Aug 16 j 22:01	20°♂33'03		minimum elong	-1929 May 29 j 06:27	19°♂24'47	0°35'21
	-1934 Aug 30 j 01:12	0°♂		max. Earth dist.	-1929 Jun 08 j 18:11	26°♂10'00	2.65311 AU
	-1934 Oct 09 j 03:00	0°♂			-1929 Jun 14 j 17:30	0°♂	
	-1934 Nov 16 j 15:42	0°♂		morning rise	-1929 Jul 15 j 09:18	19°♂33'59	
evening set	-1934 Dec 12 j 02:06	20°♂03'14			-1929 Jul 31 j 19:40	0°♂	
	-1934 Dec 24 j 17:13	0°♂			-1929 Sep 17 j 05:26	0°♂	
	-1933 Feb 01 j 06:46	0°♂			-1929 Nov 03 j 22:26	0°♂	
					-1929 Dec 22 j 17:28	0°♂	
conjunction	-1933 Feb 16 j 08:38	11°♂29'12	-1°-1'-36		-1928 Feb 13 j 14:23	0°♂	
minimum elong	-1933 Feb 16 j 10:42	11°♂33'07	1°01'38	desc. node	-1928 Apr 07 j 19:13	21°♂40'27	
	-1933 Mar 13 j 04:11	0°♂		retrograde	-1928 Apr 27 j 03:17	23°♂52'02	
max. Earth dist.	-1933 Apr 05 j 13:23	16°♂57'36	2.45923 AU	opposition	-1928 May 27 j 18:43	18°♂41'52	-3°-22'-6
morning rise	-1933 Apr 20 j 16:14	27°♂40'00		greatest brilliancy	-1928 May 28 j 11:00	18°♂30'36	-2.8m
	-1933 Apr 24 j 00:14	0°♂		min. Earth dist.	-1928 Jun 01 j 04:51	17°♂28'27	0.38957 AU
	-1933 Jun 07 j 03:16	0°♂		direct	-1928 Jun 28 j 17:58	12°♂59'33	
asc. node	-1933 Jun 20 j 22:35	9°♂03'16			-1928 Aug 23 j 01:20	0°♂	
	-1933 Jul 23 j 19:30	0°♂			-1928 Oct 11 j 14:26	0°♂	
	-1933 Sep 11 j 21:09	0°♂			-1928 Nov 25 j 02:57	0°♂	
	-1933 Nov 09 j 13:30	0°♂			-1927 Jan 08 j 06:02	0°♂	
retrograde	-1932 Jan 03 j 01:27	13°♂43'59		asc. node	-1927 Feb 09 j 18:46	21°♂45'47	
opposition	-1932 Feb 10 j 03:45	5°♂08'14	4°44'14		-1927 Feb 22 j 06:09	0°♂	
greatest brilliancy	-1932 Feb 11 j 07:38	4°♂41'26	-1.5m		-1927 Apr 09 j 09:43	0°♂	
min. Earth dist.	-1932 Feb 15 j 15:54	3°♂01'24	0.61950 AU	evening set	-1927 May 19 j 16:19	25°♂44'15	
	-1932 Feb 24 j 00:51	30°♂♂			-1927 May 26 j 09:07	0°♂	
direct	-1932 Mar 22 j 06:32	25°♂12'51		max. Earth dist.	-1927 Jul 01 j 06:22	22°♂49'50	2.67232 AU
	-1932 Apr 20 j 07:30	0°♂					
	-1932 Jun 21 j 22:58	0°♂		conjunction	-1927 Jul 05 j 14:54	25°♂36'27	1°04'41
desc. node	-1932 Jul 03 j 20:28	7°♂20'34		minimum elong	-1927 Jul 05 j 14:00	25°♂35'00	1°04'42
	-1932 Aug 06 j 18:05	0°♂			-1927 Jul 12 j 12:05	0°♂	
	-1932 Sep 16 j 20:43	0°♂		morning rise	-1927 Aug 19 j 13:14	24°♂27'31	
	-1932 Oct 25 j 21:18	0°♂			-1927 Aug 28 j 02:12	0°♂	
	-1932 Dec 03 j 07:50	0°♂			-1927 Oct 12 j 17:37	0°♂	
	-1931 Jan 11 j 06:59	0°♂			-1927 Nov 26 j 08:31	0°♂	
evening set	-1931 Feb 16 j 00:39	26°♂38'46			-1926 Jan 09 j 04:02	0°♂	
	-1931 Feb 20 j 14:58	0°♂			-1926 Feb 21 j 15:53	0°♂	
	-1931 Apr 03 j 20:31	0°♂		desc. node	-1926 Feb 23 j 18:50	1°♂27'27	
					-1926 Apr 07 j 05:20	0°♂	
conjunction	-1931 Apr 14 j 20:05	7°♂34'17	0°-13'-41		-1926 May 28 j 23:26	0°♂	
minimum elong	-1931 Apr 14 j 20:50	7°♂35'33	0°13'40	retrograde	-1926 Jul 12 j 10:54	11°♂54'45	
behind sun begin	-1931 Apr 14 j 09:12	7°♂15'37		min. Earth dist.	-1926 Aug 08 j 05:31	7°♂14'55	0.41347 AU
behind sun end	-1931 Apr 15 j 08:28	7°♂55'28		greatest brilliancy	-1926 Aug 13 j 12:07	5°♂36'21	-2.6m
asc. node	-1931 May 07 j 22:05	23°♂12'01		opposition	-1926 Aug 15 j 08:21	5°♂01'35	-6°-10'-54
max. Earth dist.	-1931 May 12 j 21:16	26°♂31'02	2.57994 AU		-1926 Sep 04 j 22:57	30°♂♂	
	-1931 May 18 j 03:03	0°♂		direct	-1926 Sep 15 j 05:15	29°♂17'15	
morning rise	-1931 Jun 06 j 15:00	12°♂48'52			-1926 Sep 25 j 16:37	0°♂	
	-1931 Jul 03 j 06:25	0°♂			-1926 Dec 09 j 05:40	0°♂	

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

asc. node	-1926 Dec 28 j 17:42	11° Υ 02'02			-1921 Dec 14 j 23:34	0° Υ	
	-1925 Jan 29 j 18:38	0° Υ		morning rise	-1920 Jan 15 j 13:36	24° Υ 48'11	
	-1925 Mar 19 j 23:51	0° Υ			-1920 Jan 22 j 04:31	0° Υ	
	-1925 May 07 j 12:29	0° Υ			-1920 Feb 29 j 18:43	0° Υ	
	-1925 Jun 24 j 06:20	0° Υ			-1920 Apr 09 j 15:05	0° Υ	
evening set	-1925 Jun 26 j 18:45	1° Υ 36'05			-1920 May 21 j 14:39	0° Υ	
max. Earth dist.	-1925 Jul 25 j 14:32	20° Υ 07'31	2.63762 AU		-1920 Jul 05 j 19:13	0° Υ	
	-1925 Aug 09 j 17:29	0° Ω		asc. node	-1920 Aug 19 j 15:51	26° Υ 39'11	
					-1920 Aug 25 j 20:47	0° Υ	
conjunction	-1925 Aug 11 j 23:56	1° Ω 29'29	1°08'37	retrograde	-1920 Nov 12 j 21:55	26° Υ 19'02	
minimum elong	-1925 Aug 12 j 00:28	1° Ω 30'22	1°08'40	opposition	-1920 Dec 22 j 20:59	16° Υ 39'05	3°55'47
	-1925 Sep 23 j 12:56	0° Υ		greatest brilliancy	-1920 Dec 22 j 19:43	16° Υ 40'21	-1.2m
morning rise	-1925 Sep 26 j 22:49	2° Υ 20'03		min. Earth dist.	-1920 Dec 23 j 00:43	16° Υ 35'21	0.67392 AU
	-1925 Nov 05 j 14:36	0° Ω		direct	-1919 Feb 01 j 12:59	6° Υ 49'53	
	-1925 Dec 17 j 03:26	0° Υ			-1919 Apr 17 j 10:17	0° Υ	
desc. node	-1924 Jan 11 j 19:21	18° Υ 59'02			-1919 Jun 09 j 21:24	0° Ω	
	-1924 Jan 26 j 13:03	0° Υ			-1919 Jul 26 j 05:56	0° Υ	
	-1924 Mar 06 j 11:14	0° Υ		desc. node	-1919 Sep 02 j 14:41	26° Υ 59'35	
	-1924 Apr 15 j 23:23	0° Υ			-1919 Sep 06 j 17:44	0° Ω	
	-1924 May 29 j 02:31	0° Υ			-1919 Oct 16 j 17:08	0° Υ	
	-1924 Jul 21 j 02:51	0° Υ		evening set	-1919 Nov 14 j 21:15	22° Υ 39'49	
retrograde	-1924 Sep 01 j 04:51	10° Υ 26'56			-1919 Nov 24 j 05:17	0° Υ	
min. Earth dist.	-1924 Oct 02 j 14:31	3° Υ 42'59	0.53832 AU		-1918 Jan 01 j 06:11	0° Υ	
opposition	-1924 Oct 09 j 17:08	0° Υ 59'56	-1°-39'-24				
greatest brilliancy	-1924 Oct 09 j 02:35	1° Υ 13'52	-1.9m	conjunction	-1918 Jan 19 j 19:58	14° Υ 33'30	-1°-6'-2
	-1924 Oct 12 j 08:21	30° Υ		minimum elong	-1918 Jan 19 j 19:26	14° Υ 32'26	1°06'05
direct	-1924 Nov 14 j 02:21	23° Υ 07'24			-1918 Feb 08 j 18:27	0° Υ	
asc. node	-1924 Nov 14 j 16:24	23° Υ 07'32		max. Earth dist.	-1918 Mar 09 j 22:10	22° Υ 05'45	2.40702 AU
	-1924 Dec 19 j 22:41	0° Υ			-1918 Mar 20 j 13:53	0° Υ	
	-1923 Feb 22 j 09:32	0° Υ		morning rise	-1918 Mar 28 j 07:34	5° Υ 40'37	
	-1923 Apr 16 j 01:08	0° Υ			-1918 May 01 j 08:23	0° Υ	
	-1923 Jun 04 j 09:33	0° Υ			-1918 Jun 14 j 13:18	0° Υ	
	-1923 Jul 21 j 07:52	0° Ω		asc. node	-1918 Jul 07 j 14:53	14° Υ 56'09	
evening set	-1923 Aug 03 j 18:03	8° Ω 52'08			-1918 Jul 31 j 17:57	0° Υ	
max. Earth dist.	-1923 Aug 21 j 19:03	21° Ω 00'42	2.55200 AU		-1918 Sep 21 j 19:57	0° Υ	
	-1923 Sep 03 j 21:48	0° Υ			-1918 Dec 16 j 02:03	0° Ω	
				retrograde	-1918 Dec 18 j 17:57	0° Ω 02'36	
conjunction	-1923 Sep 21 j 08:03	12° Υ 09'48	0°41'34		-1918 Dec 21 j 09:18	30° Υ	
minimum elong	-1923 Sep 21 j 09:35	12° Υ 12'29	0°41'35	opposition	-1917 Jan 26 j 14:22	21° Υ 03'55	4°47'19
	-1923 Oct 16 j 06:34	0° Ω		greatest brilliancy	-1917 Jan 27 j 09:44	20° Υ 45'01	-1.3m
morning rise	-1923 Nov 11 j 19:41	19° Ω 31'14		min. Earth dist.	-1917 Jan 30 j 14:52	19° Υ 29'42	0.64753 AU
	-1923 Nov 25 j 19:15	0° Υ		direct	-1917 Mar 08 j 21:58	11° Υ 02'44	
desc. node	-1923 Nov 28 j 18:03	2° Υ 13'38			-1917 May 12 j 05:53	0° Ω	
	-1922 Jan 04 j 01:25	0° Υ			-1917 Jul 03 j 12:49	0° Υ	
	-1922 Feb 11 j 18:36	0° Υ		desc. node	-1917 Jul 21 j 13:38	11° Υ 50'57	
	-1922 Mar 22 j 19:40	0° Υ			-1917 Aug 16 j 16:21	0° Ω	
	-1922 May 02 j 05:58	0° Υ			-1917 Sep 26 j 05:26	0° Υ	
	-1922 Jun 14 j 14:12	0° Υ			-1917 Nov 03 j 23:16	0° Υ	
	-1922 Aug 03 j 13:24	0° Υ			-1917 Dec 12 j 04:29	0° Υ	
asc. node	-1922 Oct 02 j 15:39	21° Υ 19'00			-1916 Jan 19 j 22:16	0° Υ	
retrograde	-1922 Oct 10 j 03:20	21° Υ 40'51		evening set	-1916 Jan 23 j 14:43	2° Υ 48'32	
min. Earth dist.	-1922 Nov 15 j 11:06	13° Υ 11'08	0.63559 AU		-1916 Feb 29 j 00:32	0° Υ	
opposition	-1922 Nov 19 j 02:40	11° Υ 43'19	1°50'46	conjunction	-1916 Mar 25 j 05:26	18° Υ 10'37	0°-34'-54
greatest brilliancy	-1922 Nov 18 j 17:25	11° Υ 52'36	-1.4m	minimum elong	-1916 Mar 25 j 07:25	18° Υ 14'07	0°34'55
direct	-1922 Dec 27 j 18:25	2° Υ 34'42			-1916 Apr 11 j 00:48	0° Υ	
	-1921 Mar 21 j 16:01	0° Υ		max. Earth dist.	-1916 Apr 30 j 08:31	13° Υ 18'40	2.53752 AU
	-1921 May 14 j 17:29	0° Υ		morning rise	-1916 May 20 j 13:17	26° Υ 55'25	
	-1921 Jul 02 j 03:53	0° Ω		asc. node	-1916 May 24 j 13:17	29° Υ 35'08	
	-1921 Aug 16 j 02:01	0° Υ			-1916 May 25 j 04:16	0° Υ	
evening set	-1921 Sep 17 j 20:47	23° Υ 10'59			-1916 Jul 10 j 09:46	0° Υ	
	-1921 Sep 27 j 05:35	0° Ω			-1916 Aug 27 j 18:07	0° Υ	
max. Earth dist.	-1921 Oct 05 j 06:07	5° Ω 54'02	2.42952 AU		-1916 Oct 18 j 09:09	0° Ω	
desc. node	-1921 Oct 16 j 16:10	14° Ω 24'00			-1916 Dec 20 j 21:23	0° Υ	
	-1921 Nov 06 j 06:43	0° Υ		retrograde	-1915 Jan 29 j 05:13	7° Υ 46'41	
conjunction	-1921 Nov 12 j 16:32	4° Υ 54'51	0°-18'-15	opposition	-1915 Mar 06 j 15:16	29° Ω 57'40	3°59'53
minimum elong	-1921 Nov 12 j 15:17	4° Υ 52'26	0°18'16		-1915 Mar 06 j 12:43	30° Υ	

Planetary Phenomena of Mars from -2400 through -1900 (UT), Astrodienst AG 7-Dez-2017 14:42, page 49

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

greatest brilliancy	-1915 Mar 08 j 03:28	29° Ω 24'18	-1.8m	max. Earth dist.	-1910 Jul 15 j 23:47	9° Θ 31'52	2.65751 AU
min. Earth dist.	-1915 Mar 14 j 03:53	27° Ω 11'36	0.55748 AU				
direct	-1915 Apr 15 j 15:26	20° Ω 31'35		conjunction	-1910 Jul 28 j 07:53	17° Θ 29'06	1°10'26
	-1915 May 26 j 17:55	0° \mathbb{M}		minimum elong	-1910 Jul 28 j 07:48	17° Θ 28'59	1°10'27
desc. node	-1915 Jun 07 j 12:02	5° \mathbb{M} 16'33			-1910 Aug 16 j 13:22	0° Ω	
	-1915 Jul 20 j 12:57	0° $\underline{\Omega}$		morning rise	-1910 Sep 11 j 10:50	17° Ω 06'56	
	-1915 Sep 01 j 19:50	0° \mathbb{M}			-1910 Sep 30 j 14:51	0° \mathbb{M}	
	-1915 Oct 11 j 19:49	0° \mathbb{X}			-1910 Nov 13 j 04:08	0° $\underline{\Omega}$	
	-1915 Nov 19 j 21:33	0° $\overline{\Theta}$			-1910 Dec 25 j 09:08	0° \mathbb{M}	
	-1915 Dec 29 j 09:38	0° \approx		desc. node	-1909 Jan 28 j 11:29	24° \mathbb{M} 46'44	
	-1914 Feb 08 j 05:27	0° \mathbb{X}			-1909 Feb 04 j 14:31	0° \mathbb{X}	
evening set	-1914 Mar 21 j 06:35	28° \mathbb{X} 53'34			-1909 Mar 17 j 12:38	0° $\overline{\Theta}$	
	-1914 Mar 22 j 21:12	0° \mathbb{Y}			-1909 Apr 28 j 13:31	0° \approx	
asc. node	-1914 Apr 11 j 12:34	13° \mathbb{Y} 22'27			-1909 Jun 14 j 17:52	0° \mathbb{X}	
	-1914 May 06 j 10:41	0° \mathbb{X}		retrograde	-1909 Aug 15 j 06:31	20° \mathbb{X} 39'39	
				min. Earth dist.	-1909 Sep 13 j 11:43	14° \mathbb{X} 47'48	0.48833 AU
conjunction	-1914 May 13 j 02:53	4° \mathbb{X} 23'47	0°18'11	greatest brilliancy	-1909 Sep 20 j 04:06	12° \mathbb{X} 22'40	-2.2m
minimum elong	-1914 May 13 j 02:07	4° \mathbb{X} 22'30	0°18'13	opposition	-1909 Sep 21 j 11:34	11° \mathbb{X} 54'02	-3°-26'-47
max. Earth dist.	-1914 May 30 j 00:19	15° \mathbb{X} 25'39	2.63083 AU	direct	-1909 Oct 25 j 03:46	4° \mathbb{X} 46'23	
	-1914 Jun 21 j 14:24	0° \mathbb{I}		asc. node	-1909 Dec 02 j 07:55	12° \mathbb{X} 37'20	
morning rise	-1914 Jun 30 j 21:51	5° \mathbb{I} 57'30			-1908 Jan 10 j 03:12	0° \mathbb{Y}	
	-1914 Aug 07 j 20:14	0° Θ			-1908 Mar 04 j 12:57	0° \mathbb{X}	
	-1914 Sep 24 j 21:18	0° Ω			-1908 Apr 24 j 00:23	0° \mathbb{I}	
	-1914 Nov 13 j 04:15	0° \mathbb{M}			-1908 Jun 11 j 13:47	0° Θ	
	-1913 Jan 05 j 03:48	0° $\underline{\Omega}$		evening set	-1908 Jul 19 j 05:44	24° Θ 06'00	
retrograde	-1913 Mar 28 j 22:39	27° $\underline{\Omega}$ 53'35			-1908 Jul 28 j 06:14	0° Ω	
desc. node	-1913 Apr 25 j 12:07	23° $\underline{\Omega}$ 26'18		max. Earth dist.	-1908 Aug 10 j 00:38	8° Ω 26'20	2.59103 AU
opposition	-1913 Apr 30 j 07:36	21° $\underline{\Omega}$ 59'08	0°-18'-19				
greatest brilliancy	-1913 Apr 29 j 06:48	22° $\underline{\Omega}$ 18'11	-2.5m	conjunction	-1908 Sep 04 j 10:52	25° Ω 35'13	0°56'07
min. Earth dist.	-1913 May 07 j 22:09	19° $\underline{\Omega}$ 39'04	0.42847 AU	minimum elong	-1908 Sep 04 j 12:13	25° Ω 37'32	0°56'08
direct	-1913 Jun 04 j 05:43	14° $\underline{\Omega}$ 56'32			-1908 Sep 10 j 21:18	0° \mathbb{M}	
	-1913 Jul 25 j 12:39	0° \mathbb{M}		morning rise	-1908 Oct 23 j 01:05	29° \mathbb{M} 41'23	
	-1913 Sep 12 j 17:56	0° \mathbb{X}			-1908 Oct 23 j 11:26	0° $\underline{\Omega}$	
	-1913 Oct 25 j 13:24	0° $\overline{\Theta}$			-1908 Dec 03 j 07:51	0° \mathbb{M}	
	-1913 Dec 06 j 10:44	0° \approx		desc. node	-1908 Dec 15 j 10:25	9° \mathbb{M} 05'27	
	-1912 Jan 18 j 01:36	0° \mathbb{X}			-1907 Jan 11 j 22:37	0° \mathbb{X}	
asc. node	-1912 Feb 27 j 10:22	27° \mathbb{X} 32'34			-1907 Feb 20 j 00:08	0° $\overline{\Theta}$	
	-1912 Mar 02 j 02:21	0° \mathbb{Y}			-1907 Mar 31 j 10:05	0° \approx	
	-1912 Apr 16 j 14:59	0° \mathbb{X}			-1907 May 11 j 10:05	0° \mathbb{X}	
evening set	-1912 May 04 j 03:34	11° \mathbb{X} 20'10			-1907 Jun 25 j 05:34	0° \mathbb{Y}	
	-1912 Jun 02 j 06:03	0° \mathbb{I}			-1907 Aug 22 j 06:03	0° \mathbb{X}	
				retrograde	-1907 Sep 25 j 20:23	7° \mathbb{X} 00'14	
conjunction	-1912 Jun 21 j 02:45	12° \mathbb{I} 02'07	0°56'04	asc. node	-1907 Oct 19 j 07:57	3° \mathbb{X} 07'42	
minimum elong	-1912 Jun 21 j 01:31	12° \mathbb{I} 00'10	0°56'05		-1907 Oct 28 j 03:05	30° \mathbb{X} ' \mathbb{Y}	
max. Earth dist.	-1912 Jun 22 j 07:14	12° \mathbb{I} 47'30	2.67137 AU	min. Earth dist.	-1907 Oct 30 j 09:18	29° \mathbb{Y} 07'10	0.60378 AU
	-1912 Jul 19 j 07:06	0° Θ		opposition	-1907 Nov 04 j 11:07	27° \mathbb{Y} 06'07	0°40'32
morning rise	-1912 Aug 05 j 12:10	10° Θ 59'40		greatest brilliancy	-1907 Nov 04 j 06:11	27° \mathbb{Y} 11'01	-1.6m
	-1912 Sep 04 j 02:42	0° Ω		direct	-1907 Dec 11 j 23:24	18° \mathbb{Y} 22'02	
	-1912 Oct 20 j 08:40	0° \mathbb{M}			-1906 Jan 30 j 06:28	0° \mathbb{X}	
	-1912 Dec 05 j 02:20	0° $\underline{\Omega}$			-1906 Apr 01 j 06:50	0° \mathbb{I}	
	-1911 Jan 19 j 18:39	0° \mathbb{M}			-1906 May 22 j 19:37	0° Θ	
	-1911 Mar 07 j 14:39	0° \mathbb{X}			-1906 Jul 09 j 12:03	0° Ω	
desc. node	-1911 Mar 12 j 12:25	3° \mathbb{X} 01'27			-1906 Aug 23 j 05:41	0° \mathbb{M}	
	-1911 Apr 30 j 09:01	0° $\overline{\Theta}$		evening set	-1906 Aug 30 j 03:05	4° \mathbb{M} 47'14	
retrograde	-1911 Jun 15 j 13:44	12° $\overline{\Theta}$ 05'05		max. Earth dist.	-1906 Sep 14 j 00:42	15° \mathbb{M} 17'17	2.47969 AU
min. Earth dist.	-1911 Jul 13 j 01:01	7° $\overline{\Theta}$ 36'12	0.38152 AU		-1906 Oct 04 j 10:33	0° $\underline{\Omega}$	
opposition	-1911 Jul 16 j 20:11	6° $\overline{\Theta}$ 33'39	-6°-43'00				
greatest brilliancy	-1911 Jul 15 j 19:05	6° $\overline{\Theta}$ 50'56	-2.8m	conjunction	-1906 Oct 21 j 09:41	12° $\underline{\Omega}$ 30'12	0°08'04
direct	-1911 Aug 15 j 12:55	1° $\overline{\Theta}$ 32'07		minimum elong	-1906 Oct 21 j 10:09	12° $\underline{\Omega}$ 31'03	0°08'02
	-1911 Nov 02 j 12:06	0° \approx		behind sun begin	-1906 Oct 20 j 13:37	11° $\underline{\Omega}$ 52'54	
	-1911 Dec 22 j 13:00	0° \mathbb{X}		behind sun end	-1906 Oct 22 j 06:40	13° $\underline{\Omega}$ 09'14	
asc. node	-1910 Jan 14 j 08:07	14° \mathbb{X} 16'45		desc. node	-1906 Nov 02 j 09:10	21° $\underline{\Omega}$ 28'26	
	-1910 Feb 08 j 06:34	0° \mathbb{Y}			-1906 Nov 13 j 15:24	0° \mathbb{M}	
	-1910 Mar 27 j 21:45	0° \mathbb{X}		morning rise	-1906 Dec 18 j 19:05	27° \mathbb{M} 05'50	
	-1910 May 14 j 16:09	0° \mathbb{I}			-1906 Dec 22 j 12:30	0° \mathbb{X}	
evening set	-1910 Jun 12 j 03:55	17° \mathbb{I} 58'10			-1905 Jan 29 j 20:55	0° $\overline{\Theta}$	
	-1910 Jul 01 j 02:21	0° Θ			-1905 Mar 09 j 13:40	0° \approx	

Attention, astronomical year style is used: The year -2399 in astronomical counting style is the year 2400 BCE in historical counting style.

	-1905 Apr 18 j 12:50	0°♄		-1900 Jun 14 j 01:02	0°♍
	-1905 May 30 j 19:08	0°♅	desc. node	-1900 Jun 24 j 06:02	5°♍54'06
	-1905 Jul 15 j 22:50	0°♆		-1900 Jul 31 j 16:01	0°♎
asc. node	-1905 Sep 06 j 06:40	28°♄29'46		-1900 Sep 11 j 08:21	0°♎
	-1905 Sep 09 j 14:57	0°♇		-1900 Oct 20 j 15:19	0°♏
retrograde	-1905 Oct 31 j 13:25	13°♇23'47		-1900 Nov 28 j 05:38	0°♏
min. Earth dist.	-1905 Dec 09 j 07:18	4°♇06'04	0.66653 AU		
opposition	-1905 Dec 10 j 15:35	3°♇33'37	3°16'12		
greatest brilliancy	-1905 Dec 10 j 08:54	3°♇40'21	-1.3m		
	-1905 Dec 19 j 18:44	30°♄			
direct	-1904 Jan 19 j 16:00	23°♄57'00			
	-1904 Feb 22 j 22:10	0°♇			
	-1904 Apr 28 j 14:34	0°♈			
	-1904 Jun 18 j 07:10	0°♉			
	-1904 Aug 02 j 22:02	0°♊			
	-1904 Sep 14 j 05:10	0°♋			
desc. node	-1904 Sep 19 j 07:15	3°♋44'12			
evening set	-1904 Oct 20 j 18:39	27°♋23'25			
	-1904 Oct 24 j 04:27	0°♌			
	-1904 Dec 01 j 17:47	0°♏			
conjunction	-1904 Dec 22 j 10:27	16°♏18'27	0°-55'-38		
minimum elong	-1904 Dec 22 j 07:35	16°♏12'48	0°55'40		
max. Earth dist.	-1904 Dec 25 j 19:00	18°♏57'16	2.37391 AU		
	-1903 Jan 08 j 19:25	0°♐			
	-1903 Feb 16 j 07:21	0°♑			
morning rise	-1903 Mar 01 j 12:33	10°♑06'26			
	-1903 Mar 28 j 01:44	0°♒			
	-1903 May 08 j 19:52	0°♓			
	-1903 Jun 22 j 05:23	0°♈			
asc. node	-1903 Jul 24 j 06:14	20°♈19'23			
	-1903 Aug 09 j 06:43	0°♉			
	-1903 Oct 04 j 05:21	0°♊			
retrograde	-1903 Dec 04 j 09:26	16°♊55'23			
opposition	-1902 Jan 12 j 19:31	7°♊37'52	4°36'30		
greatest brilliancy	-1902 Jan 13 j 06:10	7°♊27'20	-1.3m		
min. Earth dist.	-1902 Jan 15 j 07:45	6°♊38'19	0.66568 AU		
	-1902 Feb 03 j 21:34	30°♄			
direct	-1902 Feb 23 j 01:19	27°♇37'27			
	-1902 Mar 15 j 11:45	0°♈			
	-1902 May 24 j 21:32	0°♉			
	-1902 Jul 12 j 17:01	0°♊			
desc. node	-1902 Aug 07 j 06:15	17°♊23'54			
	-1902 Aug 24 j 23:00	0°♋			
	-1902 Oct 04 j 04:20	0°♌			
greatest brilliancy	-1902 Nov 11 j 10:23	29°♌44'01	1.2m		
	-1902 Nov 11 j 18:32	0°♏			
	-1902 Dec 19 j 20:49	0°♐			
evening set	-1902 Dec 27 j 20:09	6°♐15'06			
	-1901 Jan 27 j 11:13	0°♑			
conjunction	-1901 Mar 02 j 22:05	25°♑57'32	0°-53'-45		
minimum elong	-1901 Mar 03 j 00:38	26°♑02'16	0°53'46		
	-1901 Mar 08 j 09:37	0°♒			
max. Earth dist.	-1901 Apr 16 j 03:05	27°♒48'44	2.48861 AU		
	-1901 Apr 19 j 06:06	0°♓			
morning rise	-1901 May 02 j 13:54	9°♓14'02			
	-1901 Jun 02 j 08:04	0°♈			
asc. node	-1901 Jun 11 j 05:18	5°♈51'51			
	-1901 Jul 18 j 18:23	0°♉			
	-1901 Sep 06 j 00:24	0°♊			
	-1901 Oct 31 j 00:21	0°♋			
retrograde	-1900 Jan 12 j 09:31	22°♋22'53			
opposition	-1900 Feb 18 j 23:08	14°♋01'56	4°34'11		
greatest brilliancy	-1900 Feb 20 j 07:02	13°♋31'38	-1.5m		
min. Earth dist.	-1900 Feb 25 j 05:41	11°♋39'05	0.60004 AU		
direct	-1900 Mar 30 j 19:15	4°♌13'20			

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 1

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

conjunction	-1899 Apr 25 j 15:25	18° Υ 06'58	0°-1'-29			-1894 Jan 03 j 04:33	0° \mathbb{M}	
minimum elong	-1899 Apr 25 j 15:30	18° Υ 07'06	0°01'29	desc. node		-1894 Feb 14 j 04:22	29° \mathbb{M} 39'48	
behind sun begin	-1899 Apr 24 j 17:30	17° Υ 30'03				-1894 Feb 14 j 15:46	0° \mathcal{Z}	
behind sun end	-1899 Apr 26 j 13:30	18° Υ 44'07				-1894 Mar 29 j 08:39	0° \mathcal{Z}	
asc. node	-1899 Apr 28 j 03:04	19° Υ 47'16				-1894 May 14 j 01:38	0° \approx	
	-1899 May 13 j 10:28	0° \mathcal{B}		retrograde		-1894 Jul 25 j 16:00	27° \approx 22'46	
max. Earth dist.	-1899 May 19 j 11:21	3° \mathcal{B} 59'26	2.60045 AU	min. Earth dist.		-1894 Aug 22 j 00:23	22° \approx 21'47	0.43822 AU
morning rise	-1899 Jun 15 j 18:53	21° \mathcal{B} 48'16		greatest brilliancy		-1894 Aug 28 j 02:52	20° \approx 20'15	-2.4m
	-1899 Jun 28 j 12:49	0° \mathbb{I}		opposition		-1894 Aug 29 j 22:59	19° \approx 43'24	-5°-17'-54
	-1899 Aug 15 j 01:10	0° \mathcal{E}		direct		-1894 Sep 30 j 17:49	13° \approx 28'50	
	-1899 Oct 03 j 00:25	0° \mathcal{Q}				-1894 Nov 27 j 22:47	0° \mathcal{H}	
	-1899 Nov 23 j 21:23	0° \mathbb{P}		asc. node		-1894 Dec 18 j 23:30	10° \mathcal{H} 32'19	
	-1898 Jan 27 j 19:05	0° \mathcal{A}				-1893 Jan 22 j 22:23	0° Υ	
retrograde	-1898 Mar 03 j 04:45	6° \mathcal{A} 11'30				-1893 Mar 14 j 11:37	0° \mathcal{B}	
	-1898 Apr 04 j 15:36	30° \mathbb{R} \mathbb{P}				-1893 May 02 j 14:00	0° \mathbb{I}	
opposition	-1898 Apr 06 j 07:43	29° \mathbb{P} 26'13	1°59'23			-1893 Jun 19 j 13:58	0° \mathcal{E}	
greatest brilliancy	-1898 Apr 07 j 08:12	29° \mathbb{P} 05'26	-2.2m	evening set		-1893 Jul 05 j 06:04	9° \mathcal{E} 58'57	
min. Earth dist.	-1898 Apr 14 j 18:46	26° \mathbb{P} 34'47	0.47961 AU	max. Earth dist.		-1893 Jul 31 j 11:29	26° \mathcal{E} 57'18	2.62305 AU
desc. node	-1898 May 12 j 04:43	21° \mathbb{P} 10'47				-1893 Aug 05 j 02:58	0° \mathcal{Q}	
direct	-1898 May 13 j 20:12	21° \mathbb{P} 09'39						
	-1898 Jun 21 j 06:23	0° \mathcal{A}		conjunction		-1893 Aug 20 j 16:39	10° \mathcal{Q} 17'50	1°05'27
	-1898 Aug 13 j 18:57	0° \mathbb{M}		minimum elong		-1893 Aug 20 j 17:32	10° \mathcal{Q} 19'18	1°05'28
	-1898 Sep 25 j 14:03	0° \mathcal{Z}				-1893 Sep 18 j 20:55	0° \mathbb{P}	
	-1898 Nov 05 j 03:05	0° \mathcal{Z}		morning rise		-1893 Oct 06 j 09:00	12° \mathbb{P} 05'21	
	-1898 Dec 15 j 16:17	0° \approx				-1893 Oct 31 j 18:36	0° \mathcal{A}	
	-1897 Jan 26 j 08:24	0° \mathcal{H}				-1893 Dec 12 j 01:21	0° \mathbb{M}	
	-1897 Mar 10 j 16:19	0° Υ		desc. node		-1892 Jan 02 j 03:13	15° \mathbb{M} 41'07	
asc. node	-1897 Mar 16 j 02:03	3° Υ 39'26				-1892 Jan 21 j 03:45	0° \mathcal{Z}	
evening set	-1897 Apr 18 j 17:40	26° Υ 04'07				-1892 Feb 29 j 17:13	0° \mathcal{Z}	
	-1897 Apr 24 j 17:25	0° \mathcal{B}				-1892 Apr 09 j 17:07	0° \approx	
						-1892 May 21 j 18:01	0° \mathcal{H}	
conjunction	-1897 Jun 07 j 04:44	28° \mathcal{B} 08'43	0°43'56			-1892 Jul 08 j 21:07	0° Υ	
minimum elong	-1897 Jun 07 j 03:25	28° \mathcal{B} 06'37	0°43'57	retrograde		-1892 Sep 10 j 13:30	20° Υ 54'28	
	-1897 Jun 10 j 02:11	0° \mathbb{I}		min. Earth dist.		-1892 Oct 13 j 03:05	13° Υ 43'58	0.56350 AU
max. Earth dist.	-1897 Jun 14 j 07:22	2° \mathbb{I} 41'57	2.66193 AU	opposition		-1892 Oct 19 j 13:17	11° Υ 13'46	0°-43'-59
morning rise	-1897 Jul 23 j 12:37	27° \mathbb{I} 42'15		greatest brilliancy		-1892 Oct 19 j 07:14	11° Υ 19'41	-1.8m
	-1897 Jul 27 j 03:14	0° \mathcal{E}		asc. node		-1892 Nov 04 j 22:59	5° Υ 38'10	
	-1897 Sep 12 j 07:01	0° \mathcal{Q}		direct		-1892 Nov 24 j 17:40	3° Υ 00'42	
	-1897 Oct 29 j 08:58	0° \mathbb{P}				-1891 Feb 14 j 19:05	0° \mathcal{B}	
	-1897 Dec 15 j 18:35	0° \mathcal{A}				-1891 Apr 10 j 10:45	0° \mathbb{I}	
	-1896 Feb 02 j 20:46	0° \mathbb{M}				-1891 May 30 j 11:02	0° \mathcal{E}	
desc. node	-1896 Mar 29 j 03:59	29° \mathbb{M} 11'07				-1891 Jul 16 j 15:32	0° \mathcal{Q}	
	-1896 Mar 31 j 01:44	0° \mathcal{Z}		evening set		-1891 Aug 13 j 00:11	18° \mathcal{Q} 11'25	
retrograde	-1896 May 15 j 04:02	10° \mathcal{Z} 53'07		max. Earth dist.		-1891 Aug 29 j 11:09	29° \mathcal{Q} 25'59	2.52736 AU
opposition	-1896 Jun 14 j 13:06	5° \mathcal{Z} 52'40	-5°-3'-43			-1891 Aug 30 j 06:52	0° \mathbb{P}	
greatest brilliancy	-1896 Jun 14 j 20:13	5° \mathcal{Z} 47'54	-2.9m					
min. Earth dist.	-1896 Jun 16 j 02:08	5° \mathcal{Z} 27'54	0.37806 AU	conjunction		-1891 Oct 01 j 16:31	22° \mathbb{P} 50'08	0°30'44
direct	-1896 Jul 15 j 02:19	0° \mathcal{Z} 42'14		minimum elong		-1891 Oct 01 j 17:53	22° \mathbb{P} 52'35	0°30'44
	-1896 Oct 01 j 03:51	0° \mathcal{Z}				-1891 Oct 11 j 14:25	0° \mathcal{A}	
	-1896 Nov 17 j 17:43	0° \approx		desc. node		-1891 Nov 19 j 01:40	28° \mathcal{A} 31'59	
	-1895 Jan 02 j 04:45	0° \mathcal{H}				-1891 Nov 21 j 00:14	0° \mathbb{M}	
asc. node	-1895 Jan 31 j 00:59	18° \mathcal{H} 58'58		morning rise		-1891 Nov 24 j 07:30	2° \mathbb{M} 30'07	
	-1895 Feb 16 j 22:03	0° Υ				-1891 Dec 30 j 03:04	0° \mathcal{Z}	
	-1895 Apr 04 j 11:42	0° \mathcal{B}				-1890 Feb 06 j 16:44	0° \mathcal{Z}	
	-1895 May 21 j 16:31	0° \mathbb{I}				-1890 Mar 17 j 14:01	0° \approx	
evening set	-1895 May 28 j 08:15	4° \mathbb{I} 13'08				-1890 Apr 26 j 18:50	0° \mathcal{H}	
max. Earth dist.	-1895 Jul 06 j 15:44	29° \mathbb{I} 12'33	2.66930 AU			-1890 Jun 08 j 13:49	0° Υ	
	-1895 Jul 07 j 21:28	0° \mathcal{E}				-1890 Jul 26 j 12:55	0° \mathcal{B}	
				asc. node		-1890 Sep 22 j 22:53	26° \mathcal{B} 20'04	
conjunction	-1895 Jul 13 j 21:34	3° \mathcal{E} 50'17	1°07'57			-1890 Oct 15 j 05:14	0° \mathbb{I}	
minimum elong	-1895 Jul 13 j 20:56	3° \mathcal{E} 49'17	1°07'59	retrograde		-1890 Oct 18 j 01:35	0° \mathbb{I} 03'11	
	-1895 Aug 23 j 10:21	0° \mathcal{Q}				-1890 Oct 20 j 21:12	30° \mathbb{R} \mathcal{B}	
morning rise	-1895 Aug 27 j 18:12	2° \mathcal{Q} 49'29		min. Earth dist.		-1890 Nov 24 j 06:51	21° \mathcal{B} 15'15	0.64930 AU
	-1895 Oct 07 j 20:23	0° \mathbb{P}		opposition		-1890 Nov 27 j 02:51	20° \mathcal{B} 06'54	2°25'35
	-1895 Nov 21 j 01:14	0° \mathcal{A}		greatest brilliancy		-1890 Nov 26 j 17:24	20° \mathcal{B} 16'24	-1.4m

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 2

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

direct	-1889 Jan 05 j 07:10	10°♄47'09		conjunction	-1884 Apr 06 j 05:31	29°♄55'55	0°-22'-45
	-1889 Mar 13 j 10:42	0°♂		minimum elong	-1884 Apr 06 j 06:47	29°♄58'09	0°22'46
	-1889 May 09 j 01:17	0°♂			-1884 Apr 06 j 07:51	0°♄	
	-1889 Jun 27 j 04:26	0°♂		max. Earth dist.	-1884 May 07 j 18:47	21°♄30'49	2.56177 AU
	-1889 Aug 11 j 08:24	0°♄		asc. node	-1884 May 14 j 19:53	26°♄14'05	
	-1889 Sep 22 j 13:34	0°♂			-1884 May 20 j 11:37	0°♄	
evening set	-1889 Sep 29 j 08:55	5°♂00'15		morning rise	-1884 May 30 j 12:03	6°♄37'20	
desc. node	-1889 Oct 07 j 01:16	10°♂42'05			-1884 Jul 05 j 14:23	0°♂	
max. Earth dist.	-1889 Oct 21 j 18:43	21°♂46'08	2.40322 AU		-1884 Aug 22 j 13:13	0°♂	
	-1889 Nov 01 j 14:05	0°♂			-1884 Oct 11 j 22:23	0°♂	
					-1884 Dec 07 j 20:37	0°♄	
conjunction	-1889 Nov 26 j 13:59	19°♂19'30	0°-33'-19	retrograde	-1883 Feb 09 j 07:51	17°♄42'13	
minimum elong	-1889 Nov 26 j 11:40	19°♂15'00	0°33'20	opposition	-1883 Mar 16 j 23:42	10°♄13'35	3°26'48
	-1889 Dec 10 j 05:31	0°♄		greatest brilliancy	-1883 Mar 18 j 11:03	9°♄41'42	-1.9m
	-1888 Jan 17 j 08:44	0°♄		min. Earth dist.	-1883 Mar 25 j 00:44	7°♄20'08	0.53105 AU
morning rise	-1888 Feb 01 j 05:51	11°♄39'43		direct	-1883 Apr 25 j 06:57	1°♄06'20	
	-1888 Feb 24 j 21:14	0°♄		desc. node	-1883 May 28 j 21:16	7°♄48'04	
	-1888 Apr 04 j 15:50	0°♄			-1883 Jul 12 j 05:13	0°♂	
	-1888 May 16 j 11:45	0°♄			-1883 Aug 26 j 07:20	0°♂	
	-1888 Jun 30 j 06:24	0°♄			-1883 Oct 05 j 23:25	0°♄	
asc. node	-1888 Aug 09 j 21:11	24°♄54'25			-1883 Nov 14 j 10:15	0°♄	
	-1888 Aug 18 j 19:26	0°♂			-1883 Dec 24 j 04:49	0°♄	
	-1888 Oct 24 j 11:18	0°♄			-1882 Feb 03 j 06:03	0°♄	
retrograde	-1888 Nov 20 j 16:22	4°♄06'21			-1882 Mar 18 j 02:03	0°♄	
	-1888 Dec 15 j 18:28	30°♂11		evening set	-1882 Apr 01 j 01:18	9°♄30'19	
opposition	-1888 Dec 30 j 11:31	24°♂33'30	4°13'53	asc. node	-1882 Apr 01 j 18:12	9°♄58'53	
greatest brilliancy	-1888 Dec 30 j 14:07	24°♂30'55	-1.2m		-1882 May 01 j 18:31	0°♄	
min. Earth dist.	-1888 Dec 31 j 11:20	24°♂09'46	0.67389 AU				
direct	-1887 Feb 09 j 09:27	14°♂39'09		conjunction	-1882 May 22 j 12:45	13°♄35'05	0°28'29
	-1887 Apr 08 j 11:55	0°♄		minimum elong	-1882 May 22 j 11:40	13°♄33'19	0°28'30
	-1887 Jun 04 j 00:16	0°♂		max. Earth dist.	-1882 Jun 04 j 18:14	22°♄09'03	2.64419 AU
	-1887 Jul 21 j 02:19	0°♄			-1882 Jun 16 j 22:58	0°♂	
desc. node	-1887 Aug 23 j 23:54	23°♄35'53		morning rise	-1882 Jul 09 j 07:00	14°♂16'15	
	-1887 Sep 01 j 20:23	0°♂			-1882 Aug 03 j 02:04	0°♄	
	-1887 Oct 11 j 21:58	0°♂			-1882 Sep 19 j 17:41	0°♂	
	-1887 Nov 19 j 10:52	0°♄			-1882 Nov 07 j 00:55	0°♄	
evening set	-1887 Nov 30 j 00:21	8°♄19'28			-1882 Dec 27 j 06:13	0°♂	
	-1887 Dec 27 j 11:51	0°♄			-1881 Feb 23 j 09:23	0°♂	
				retrograde	-1881 Apr 14 j 11:27	12°♂23'27	
conjunction	-1886 Feb 04 j 14:27	0°♄27'43	-1°-5'-10	desc. node	-1881 Apr 15 j 20:44	12°♂22'44	
minimum elong	-1886 Feb 04 j 15:35	0°♄29'55	1°05'13	opposition	-1881 May 15 j 18:37	6°♂55'57	-1°-59'-7
	-1886 Feb 04 j 00:01	0°♄		greatest brilliancy	-1881 May 16 j 09:42	6°♂45'01	-2.7m
	-1886 Mar 15 j 19:25	0°♄		min. Earth dist.	-1881 May 21 j 23:15	5°♂08'27	0.40474 AU
max. Earth dist.	-1886 Mar 26 j 15:51	7°♄57'00	2.43537 AU	direct	-1881 Jun 18 j 02:16	0°♂38'54	
morning rise	-1886 Apr 10 j 23:34	18°♄59'39			-1881 Sep 02 j 13:52	0°♄	
	-1886 Apr 26 j 13:10	0°♄			-1881 Oct 18 j 02:18	0°♄	
	-1886 Jun 09 j 15:17	0°♄			-1881 Nov 30 j 04:26	0°♄	
asc. node	-1886 Jun 27 j 20:06	11°♄53'48			-1880 Jan 12 j 12:21	0°♄	
	-1886 Jul 26 j 10:23	0°♂		asc. node	-1880 Feb 17 j 16:10	24°♄27'16	
	-1886 Sep 15 j 03:13	0°♄			-1880 Feb 25 j 23:58	0°♄	
	-1886 Nov 16 j 20:12	0°♂			-1880 Apr 11 j 19:39	0°♄	
retrograde	-1886 Dec 27 j 09:21	8°♂14'17		evening set	-1880 May 13 j 03:12	20°♄07'19	
	-1885 Feb 02 j 10:35	30°♄08			-1880 May 28 j 14:34	0°♂	
opposition	-1885 Feb 03 j 20:00	29°♄27'45	4°47'06	max. Earth dist.	-1880 Jun 27 j 13:53	19°♂05'22	2.67292 AU
greatest brilliancy	-1885 Feb 04 j 20:12	29°♄04'17	-1.4m				
min. Earth dist.	-1885 Feb 08 j 16:11	27°♄35'11	0.63328 AU	conjunction	-1880 Jun 29 j 11:34	20°♂18'07	1°01'31
direct	-1885 Mar 17 j 01:26	19°♄28'43		minimum elong	-1880 Jun 29 j 10:31	20°♂16'26	1°01'33
	-1885 May 01 j 07:33	0°♂			-1880 Jul 14 j 16:32	0°♄	
	-1885 Jun 27 j 01:38	0°♄		morning rise	-1880 Aug 13 j 13:26	19°♄08'28	
desc. node	-1885 Jul 11 j 22:06	9°♄26'21			-1880 Aug 30 j 09:13	0°♂	
	-1885 Aug 11 j 03:16	0°♂			-1880 Oct 15 j 06:55	0°♄	
	-1885 Sep 21 j 00:21	0°♄			-1880 Nov 29 j 09:03	0°♂	
	-1885 Oct 29 j 22:12	0°♄			-1879 Jan 12 j 21:47	0°♂	
	-1885 Dec 07 j 06:00	0°♄			-1879 Feb 26 j 13:27	0°♄	
	-1884 Jan 15 j 01:52	0°♄		desc. node	-1879 Mar 02 j 20:01	2°♄50'03	
evening set	-1884 Feb 06 j 17:37	17°♄04'20			-1879 Apr 14 j 11:46	0°♄	
	-1884 Feb 24 j 06:10	0°♄		retrograde	-1879 Jul 01 j 07:29	29°♄44'53	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 3

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

min. Earth dist.	-1879 Jul 28 j 01:31	25°☾15'50	0.39651 AU	evening set	-1874 Sep 09 j 13:01	15°☾24'50	
greatest brilliancy	-1879 Aug 01 j 09:28	23°☾59'27	-2.7m	max. Earth dist.	-1874 Sep 25 j 03:15	26°☾37'18	2.45197 AU
opposition	-1879 Aug 03 j 00:15	23°☾30'43	-6°-38'-12		-1874 Sep 29 j 18:36	0°☾	
direct	-1879 Sep 02 j 06:08	18°☾08'53		desc. node	-1874 Oct 23 j 17:32	17°☾44'40	
	-1879 Oct 19 j 03:55	0°☾					
	-1879 Dec 14 j 17:42	0°☾		conjunction	-1874 Nov 02 j 15:41	25°☾13'52	0°-6'-44
asc. node	-1878 Jan 04 j 15:13	12°☾28'47		minimum elong	-1874 Nov 02 j 15:15	25°☾13'02	0°06'46
	-1878 Feb 02 j 06:44	0°☾		behind sun begin	-1874 Nov 01 j 16:51	24°☾30'38	
	-1878 Mar 22 j 17:07	0°☾		behind sun end	-1874 Nov 03 j 13:38	25°☾55'29	
	-1878 May 09 j 20:56	0°☾			-1874 Nov 08 j 22:12	0°☾	
evening set	-1878 Jun 20 j 13:06	26°☾13'41			-1874 Dec 17 j 17:26	0°☾	
	-1878 Jun 26 j 11:32	0°☾		greatest brilliancy	-1873 Jan 01 j 08:45	11°☾27'46	1.2m
max. Earth dist.	-1878 Jul 21 j 12:28	16°☾02'47	2.64754 AU	morning rise	-1873 Jan 03 j 01:57	12°☾48'34	
					-1873 Jan 24 j 23:56	0°☾	
conjunction	-1878 Aug 05 j 16:17	25°☾53'10	1°09'55		-1873 Mar 04 j 14:34	0°☾	
minimum elong	-1878 Aug 05 j 16:34	25°☾53'38	1°09'56		-1873 Apr 13 j 10:56	0°☾	
	-1878 Aug 11 j 23:17	0°☾			-1873 May 25 j 11:20	0°☾	
morning rise	-1878 Sep 20 j 04:20	26°☾06'24			-1873 Jul 09 j 21:53	0°☾	
	-1878 Sep 25 j 22:04	0°☾		asc. node	-1873 Aug 27 j 12:57	28°☾06'07	
	-1878 Nov 08 j 05:32	0°☾			-1873 Aug 31 j 06:08	0°☾	
	-1878 Dec 20 j 01:36	0°☾		retrograde	-1873 Nov 08 j 06:31	21°☾18'27	
desc. node	-1877 Jan 18 j 20:35	21°☾52'36		opposition	-1873 Dec 18 j 06:57	11°☾33'26	3°40'37
	-1877 Jan 29 j 19:35	0°☾		greatest brilliancy	-1873 Dec 18 j 02:57	11°☾37'27	-1.3m
	-1877 Mar 11 j 02:47	0°☾		min. Earth dist.	-1873 Dec 17 j 18:28	11°☾45'58	0.67186 AU
	-1877 Apr 21 j 03:00	0°☾		direct	-1872 Jan 27 j 16:07	1°☾49'21	
	-1877 Jun 04 j 09:26	0°☾			-1872 Apr 21 j 15:42	0°☾	
	-1877 Aug 05 j 13:32	0°☾			-1872 Jun 12 j 21:08	0°☾	
retrograde	-1877 Aug 25 j 19:25	2°☾44'27			-1872 Jul 28 j 23:12	0°☾	
	-1877 Sep 14 j 04:15	30°☾		desc. node	-1872 Sep 09 j 16:11	0°☾10'43	
min. Earth dist.	-1877 Sep 25 j 05:36	26°☾22'49	0.51652 AU		-1872 Sep 09 j 10:19	0°☾	
opposition	-1877 Oct 02 j 18:58	23°☾32'53	-2°-23'-38		-1872 Oct 19 j 10:24	0°☾	
greatest brilliancy	-1877 Oct 01 j 21:16	23°☾53'17	-2.0m	evening set	-1872 Nov 03 j 14:54	11°☾43'34	
direct	-1877 Nov 06 j 10:35	15°☾58'58			-1872 Nov 26 j 23:26	0°☾	
asc. node	-1877 Nov 22 j 14:07	17°☾34'28			-1871 Jan 04 j 00:30	0°☾	
	-1877 Dec 30 j 07:55	0°☾					
	-1876 Feb 27 j 02:58	0°☾		conjunction	-1871 Jan 07 j 09:19	2°☾38'58	-1°-3'-20
	-1876 Apr 18 j 18:00	0°☾		minimum elong	-1871 Jan 07 j 07:31	2°☾35'25	1°03'24
	-1876 Jun 06 j 18:24	0°☾			-1871 Feb 11 j 11:53	0°☾	
	-1876 Jul 23 j 15:09	0°☾		max. Earth dist.	-1871 Feb 16 j 13:43	3°☾53'52	2.38667 AU
evening set	-1876 Jul 28 j 00:20	2°☾52'48		morning rise	-1871 Mar 17 j 01:37	25°☾25'26	
max. Earth dist.	-1876 Aug 16 j 17:08	15°☾59'47	2.57040 AU		-1871 Mar 23 j 05:49	0°☾	
	-1876 Sep 06 j 06:39	0°☾			-1871 May 03 j 22:41	0°☾	
					-1871 Jun 17 j 03:35	0°☾	
conjunction	-1876 Sep 13 j 21:30	5°☾16'14	0°48'23	asc. node	-1871 Jul 14 j 12:27	17°☾36'38	
minimum elong	-1876 Sep 13 j 23:00	5°☾18'51	0°48'23		-1871 Aug 03 j 13:50	0°☾	
	-1876 Oct 18 j 18:57	0°☾			-1871 Sep 25 j 19:31	0°☾	
morning rise	-1876 Nov 02 j 22:36	11°☾01'59		retrograde	-1871 Dec 12 j 13:45	24°☾51'10	
	-1876 Nov 28 j 11:45	0°☾		opposition	-1870 Jan 20 j 16:13	15°☾43'40	4°44'06
desc. node	-1876 Dec 05 j 19:34	5°☾30'56		greatest brilliancy	-1870 Jan 21 j 07:39	15°☾28'29	-1.3m
	-1875 Jan 06 j 22:04	0°☾		min. Earth dist.	-1870 Jan 24 j 00:23	14°☾24'51	0.65690 AU
	-1875 Feb 14 j 18:42	0°☾		direct	-1870 Mar 02 j 23:10	5°☾42'07	
	-1875 Mar 25 j 22:33	0°☾			-1870 May 17 j 07:18	0°☾	
	-1875 May 05 j 12:43	0°☾			-1870 Jul 06 j 23:03	0°☾	
	-1875 Jun 18 j 06:44	0°☾		desc. node	-1870 Jul 28 j 15:19	14°☾27'59	
	-1875 Aug 09 j 05:31	0°☾			-1870 Aug 19 j 18:14	0°☾	
retrograde	-1875 Oct 04 j 04:22	16°☾00'55			-1870 Sep 29 j 04:36	0°☾	
asc. node	-1875 Oct 09 j 13:06	15°☾48'58			-1870 Nov 06 j 21:07	0°☾	
min. Earth dist.	-1875 Nov 08 j 17:16	7°☾46'45	0.62251 AU		-1870 Dec 15 j 00:45	0°☾	
opposition	-1875 Nov 13 j 00:11	6°☾03'44	1°23'08	evening set	-1869 Jan 12 j 04:05	21°☾55'24	
greatest brilliancy	-1875 Nov 12 j 15:55	6°☾12'01	-1.5m		-1869 Jan 22 j 16:07	0°☾	
	-1875 Nov 30 j 04:25	30°☾			-1869 Mar 03 j 15:28	0°☾	
direct	-1875 Dec 21 j 03:57	27°☾05'22					
	-1874 Jan 13 j 00:24	0°☾		conjunction	-1869 Mar 16 j 11:24	9°☾21'02	0°-43'-29
	-1874 Mar 25 j 13:52	0°☾		minimum elong	-1869 Mar 16 j 13:47	9°☾25'21	0°43'29
	-1874 May 17 j 12:03	0°☾			-1869 Apr 14 j 12:39	0°☾	
	-1874 Jul 04 j 15:46	0°☾		max. Earth dist.	-1869 Apr 25 j 07:57	7°☾29'57	2.51628 AU
	-1874 Aug 18 j 13:09	0°☾		morning rise	-1869 May 13 j 15:50	20°☾00'22	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 4

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1869 May 28 j 13:55	0°♄		greatest brilliancy	-1864 Jul 02 j 09:04	23°♄43'04	-2.9m
asc. node	-1869 Jun 01 j 10:57	2°♄34'09		direct	-1864 Aug 01 j 12:01	18°♄39'29	
	-1869 Jul 13 j 19:53	0°♄			-1864 Sep 15 j 10:57	0°♄	
	-1869 Aug 31 j 11:12	0°♄			-1864 Nov 09 j 03:49	0°♄	
	-1869 Oct 23 j 04:18	0°♄			-1864 Dec 26 j 16:13	0°♄	
retrograde	-1868 Jan 06 j 10:05	0°♄		asc. node	-1863 Jan 21 j 05:56	16°♄26'14	
	-1868 Jan 22 j 08:06	1°♄26'30			-1863 Feb 11 j 09:06	0°♄	
	-1868 Feb 06 j 09:10	30°♄22'21			-1863 Mar 30 j 11:29	0°♄	
opposition	-1868 Feb 28 j 06:38	23°♄22'21	4°17'02		-1863 May 16 j 23:14	0°♄	
greatest brilliancy	-1868 Feb 29 j 17:22	22°♄49'48	-1.7m	evening set	-1863 Jun 05 j 21:09	12°♄34'57	
min. Earth dist.	-1868 Mar 06 j 06:06	20°♄45'48	0.57750 AU		-1863 Jul 03 j 07:15	0°♄	
direct	-1868 Apr 08 j 16:22	13°♄44'29		max. Earth dist.	-1863 Jul 12 j 00:32	5°♄34'28	2.66387 AU
	-1868 Jun 04 j 04:32	0°♄					
desc. node	-1868 Jun 14 j 13:28	5°♄22'11		conjunction	-1863 Jul 22 j 03:51	12°♄04'48	1°09'52
	-1868 Jul 25 j 00:20	0°♄		minimum elong	-1863 Jul 22 j 03:32	12°♄04'18	1°09'55
	-1868 Sep 05 j 13:04	0°♄			-1863 Aug 18 j 19:28	0°♄	
	-1868 Oct 15 j 05:11	0°♄		morning rise	-1863 Sep 05 j 02:07	11°♄20'56	
	-1868 Nov 23 j 01:21	0°♄			-1863 Oct 03 j 01:16	0°♄	
	-1867 Jan 01 j 07:57	0°♄			-1863 Nov 15 j 21:48	0°♄	
	-1867 Feb 10 j 22:25	0°♄			-1863 Dec 28 j 12:30	0°♄	
evening set	-1867 Mar 12 j 16:34	21°♄10'31		desc. node	-1862 Feb 04 j 13:05	27°♄19'24	
	-1867 Mar 25 j 09:13	0°♄			-1862 Feb 08 j 05:57	0°♄	
asc. node	-1867 Apr 18 j 10:04	16°♄23'43			-1862 Mar 21 j 19:33	0°♄	
					-1862 May 03 j 22:54	0°♄	
conjunction	-1867 May 05 j 19:18	28°♄01'22	0°10'11		-1862 Jun 24 j 07:35	0°♄	
minimum elong	-1867 May 05 j 18:50	28°♄00'35	0°10'11	retrograde	-1862 Aug 06 j 18:38	11°♄27'58	
behind sun begin	-1867 May 05 j 02:10	27°♄32'57		min. Earth dist.	-1862 Sep 04 j 01:01	5°♄59'52	0.46544 AU
behind sun end	-1867 May 06 j 11:30	28°♄28'12		greatest brilliancy	-1862 Sep 10 j 14:22	3°♄42'27	-2.3m
	-1867 May 08 j 18:55	0°♄		opposition	-1862 Sep 12 j 04:20	3°♄09'03	-4°-15'-28
max. Earth dist.	-1867 May 25 j 15:29	11°♄05'11	2.61823 AU		-1862 Sep 21 j 18:18	30°♄	
	-1867 Jun 23 j 20:55	0°♄		direct	-1862 Oct 15 j 01:02	26°♄24'19	
morning rise	-1867 Jun 24 j 13:24	0°♄26'26			-1862 Nov 08 j 16:58	0°♄	
	-1867 Aug 10 j 04:44	0°♄		asc. node	-1862 Dec 09 j 05:31	11°♄20'28	
	-1867 Sep 27 j 13:53	0°♄			-1861 Jan 15 j 06:10	0°♄	
	-1867 Nov 16 j 18:42	0°♄			-1861 Mar 08 j 16:59	0°♄	
	-1866 Jan 11 j 21:19	0°♄			-1861 Apr 27 j 12:57	0°♄	
retrograde	-1866 Mar 17 j 04:09	18°♄26'27			-1861 Jun 14 j 20:50	0°♄	
opposition	-1866 Apr 19 j 08:59	12°♄08'53	0°47'29	evening set	-1861 Jul 13 j 18:55	18°♄27'19	
greatest brilliancy	-1866 Apr 19 j 19:24	12°♄00'27	-2.4m		-1861 Jul 31 j 12:35	0°♄	
min. Earth dist.	-1866 Apr 27 j 14:46	9°♄30'07	0.45055 AU	max. Earth dist.	-1861 Aug 06 j 12:42	3°♄57'03	2.60637 AU
desc. node	-1866 May 02 j 13:04	8°♄02'06					
direct	-1866 May 25 j 13:09	4°♄31'00		conjunction	-1861 Aug 29 j 14:03	19°♄20'27	1°00'40
	-1866 Aug 03 j 18:04	0°♄		minimum elong	-1861 Aug 29 j 15:14	19°♄22'27	1°00'41
	-1866 Sep 18 j 04:25	0°♄			-1861 Sep 14 j 05:53	0°♄	
	-1866 Oct 29 j 18:58	0°♄		morning rise	-1861 Oct 16 j 04:59	22°♄17'54	
	-1866 Dec 09 j 23:26	0°♄			-1861 Oct 27 j 00:16	0°♄	
	-1865 Jan 21 j 02:13	0°♄			-1861 Dec 07 j 01:49	0°♄	
	-1865 Mar 05 j 17:56	0°♄		desc. node	-1861 Dec 23 j 11:53	12°♄16'43	
asc. node	-1865 Mar 06 j 08:12	0°♄24'04			-1860 Jan 15 j 21:50	0°♄	
	-1865 Apr 20 j 00:11	0°♄			-1860 Feb 24 j 04:19	0°♄	
evening set	-1865 Apr 28 j 05:57	5°♄21'56			-1860 Apr 03 j 19:00	0°♄	
	-1865 Jun 05 j 11:36	0°♄			-1860 May 15 j 02:35	0°♄	
					-1860 Jun 29 j 20:24	0°♄	
conjunction	-1865 Jun 15 j 19:30	6°♄36'09	0°51'23		-1860 Sep 08 j 20:51	0°♄	
minimum elong	-1865 Jun 15 j 18:12	6°♄34'05	0°51'25	retrograde	-1860 Sep 19 j 11:31	0°♄45'07	
max. Earth dist.	-1865 Jun 19 j 15:56	9°♄03'41	2.66823 AU		-1860 Sep 29 j 16:46	30°♄	
	-1865 Jul 22 j 12:23	0°♄		min. Earth dist.	-1860 Oct 23 j 03:39	23°♄10'05	0.58670 AU
morning rise	-1865 Jul 31 j 13:15	5°♄45'40		asc. node	-1860 Oct 26 j 05:43	21°♄57'07	
	-1865 Sep 07 j 11:24	0°♄		opposition	-1860 Oct 28 j 20:02	20°♄55'21	0°06'44
	-1865 Oct 24 j 01:45	0°♄		greatest brilliancy	-1860 Nov 09 j 10:25	16°♄39'22	-1.7m
	-1865 Dec 09 j 11:16	0°♄		direct	-1860 Dec 04 j 18:11	12°♄24'19	
	-1864 Jan 25 j 08:29	0°♄			-1859 Feb 05 j 18:03	0°♄	
	-1864 Mar 14 j 22:25	0°♄			-1859 Apr 04 j 12:21	0°♄	
desc. node	-1864 Mar 19 j 13:50	2°♄36'18			-1859 May 25 j 09:18	0°♄	
retrograde	-1864 Jun 02 j 06:21	28°♄45'05			-1859 Jul 11 j 21:34	0°♄	
min. Earth dist.	-1864 Jul 01 j 06:54	24°♄00'26	0.37587 AU	evening set	-1859 Aug 22 j 14:23	27°♄54'06	
opposition	-1864 Jul 02 j 19:12	23°♄36'20	-6°-16'-46		-1859 Aug 25 j 15:29	0°♄	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 5

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

max. Earth dist.	-1859 Sep 06 j 23:43	8° \mathbb{M} 35'16	2.50161 AU			-1854 Jun 04 j 19:04	0° \mathcal{B}	
	-1859 Oct 06 j 22:46	0° \mathcal{A}		asc. node		-1854 Jun 18 j 03:11	8° \mathcal{B} 46'39	
						-1854 Jul 21 j 07:15	0° \mathbb{I}	
conjunction	-1859 Oct 12 j 14:08	4° \mathcal{A} 07'05	0°18'19			-1854 Sep 09 j 00:20	0° \mathcal{E}	
minimum elong	-1859 Oct 12 j 15:05	4° \mathcal{A} 08'50	0°18'19			-1854 Nov 05 j 04:19	0° \mathcal{Q}	
desc. node	-1859 Nov 09 j 10:40	24° \mathcal{A} 49'55		retrograde		-1853 Jan 05 j 08:59	16° \mathcal{Q} 38'43	
	-1859 Nov 16 j 06:38	0° \mathbb{M}		opposition		-1853 Feb 12 j 08:09	8° \mathcal{Q} 05'35	4°41'28
morning rise	-1859 Dec 07 j 16:41	16° \mathbb{M} 23'08		greatest brilliancy		-1853 Feb 13 j 12:48	7° \mathcal{Q} 38'04	-1.5m
	-1859 Dec 25 j 06:34	0° \mathcal{X}		min. Earth dist.		-1853 Feb 17 j 23:15	5° \mathcal{Q} 55'56	0.61613 AU
	-1858 Feb 01 j 17:14	0° \mathcal{Z}				-1853 Mar 08 j 20:12	30° $\mathcal{R}\mathcal{E}$	
	-1858 Mar 12 j 11:13	0° \approx		direct		-1853 Mar 25 j 08:53	28° \mathcal{E} 11'01	
	-1858 Apr 21 j 11:21	0° \mathcal{H}				-1853 Apr 11 j 17:40	0° \mathcal{Q}	
	-1858 Jun 02 j 20:39	0° \mathcal{Y}				-1853 Jun 19 j 22:00	0° \mathbb{M}	
	-1858 Jul 19 j 12:29	0° \mathcal{B}		desc. node		-1853 Jul 02 j 07:25	7° \mathbb{M} 30'49	
asc. node	-1858 Sep 13 j 04:34	28° \mathcal{B} 37'10				-1853 Aug 05 j 07:43	0° \mathcal{A}	
	-1858 Sep 16 j 18:24	0° \mathbb{I}				-1853 Sep 15 j 15:44	0° \mathbb{M}	
retrograde	-1858 Oct 25 j 21:22	8° \mathbb{I} 14'22				-1853 Oct 24 j 18:29	0° \mathcal{X}	
	-1858 Nov 30 j 20:16	30° $\mathcal{R}\mathcal{B}$				-1853 Dec 02 j 05:26	0° \mathcal{Z}	
min. Earth dist.	-1858 Dec 02 j 22:41	29° \mathcal{B} 09'34	0.66001 AU			-1852 Jan 10 j 03:52	0° \approx	
opposition	-1858 Dec 04 j 23:09	28° \mathcal{B} 20'47	2°56'31			-1852 Feb 19 j 10:26	0° \mathcal{H}	
greatest brilliancy	-1858 Dec 04 j 14:45	28° \mathcal{B} 29'15	-1.3m	evening set		-1852 Feb 20 j 03:40	0° \mathcal{H} 31'23	
direct	-1857 Jan 13 j 14:49	18° \mathcal{B} 51'14				-1852 Apr 01 j 14:16	0° \mathcal{Y}	
	-1857 Mar 03 j 03:03	0° \mathbb{I}						
	-1857 May 02 j 23:43	0° \mathcal{E}		conjunction		-1852 Apr 17 j 13:31	10° \mathcal{Y} 59'54	0°-10'-22
	-1857 Jun 22 j 00:35	0° \mathcal{Q}		minimum elong		-1852 Apr 17 j 14:04	11° \mathcal{Y} 00'51	0°10'23
	-1857 Aug 06 j 12:04	0° \mathbb{M}		behind sun begin		-1852 Apr 16 j 20:38	10° \mathcal{Y} 31'05	
	-1857 Sep 17 j 19:44	0° \mathcal{A}		behind sun end		-1852 Apr 18 j 07:31	11° \mathcal{Y} 30'35	
desc. node	-1857 Sep 27 j 09:08	7° \mathcal{A} 01'57		asc. node		-1852 May 05 j 01:02	22° \mathcal{Y} 49'32	
evening set	-1857 Oct 11 j 17:17	17° \mathcal{A} 44'34		max. Earth dist.		-1852 May 14 j 17:23	29° \mathcal{Y} 17'26	2.58421 AU
	-1857 Oct 27 j 20:33	0° \mathbb{M}				-1852 May 15 j 19:00	0° \mathcal{B}	
max. Earth dist.	-1857 Nov 16 j 23:39	15° \mathbb{M} 32'39	2.38192 AU	morning rise		-1852 Jun 08 j 23:40	15° \mathcal{B} 53'47	
	-1857 Dec 05 j 11:15	0° \mathcal{X}				-1852 Jun 30 j 20:27	0° \mathbb{I}	
						-1852 Aug 17 j 12:03	0° \mathcal{E}	
conjunction	-1857 Dec 11 j 09:49	4° \mathcal{X} 40'05	0°-47'-1			-1852 Oct 05 j 23:14	0° \mathcal{Q}	
minimum elong	-1857 Dec 11 j 06:52	4° \mathcal{X} 34'18	0°47'02			-1852 Nov 28 j 11:01	0° \mathbb{M}	
	-1856 Jan 12 j 13:36	0° \mathcal{Z}		retrograde		-1851 Feb 21 j 06:39	28° \mathbb{M} 18'00	
morning rise	-1856 Feb 17 j 21:38	28° \mathcal{Z} 20'42		opposition		-1851 Mar 28 j 03:17	21° \mathbb{M} 12'07	2°41'46
	-1856 Feb 20 j 01:10	0° \approx		greatest brilliancy		-1851 Mar 29 j 10:05	20° \mathbb{M} 45'09	-2.1m
	-1856 Mar 30 j 18:25	0° \mathcal{H}		min. Earth dist.		-1851 Apr 05 j 12:31	18° \mathbb{M} 16'54	0.50308 AU
	-1856 May 11 j 11:44	0° \mathcal{Y}		direct		-1851 May 05 j 12:46	12° \mathbb{M} 30'07	
	-1856 Jun 24 j 22:41	0° \mathcal{B}		desc. node		-1851 May 19 j 06:14	13° \mathbb{M} 44'30	
asc. node	-1856 Jul 31 j 03:39	22° \mathcal{B} 43'02				-1851 Jul 01 j 14:35	0° \mathcal{A}	
	-1856 Aug 12 j 10:26	0° \mathbb{I}				-1851 Aug 19 j 02:09	0° \mathbb{M}	
	-1856 Oct 09 j 23:39	0° \mathcal{E}				-1851 Sep 29 j 18:40	0° \mathcal{X}	
retrograde	-1856 Nov 28 j 12:45	11° \mathcal{E} 53'55				-1851 Nov 08 j 18:08	0° \mathcal{Z}	
opposition	-1855 Jan 07 j 02:50	2° \mathcal{E} 29'05	4°28'16			-1851 Dec 18 j 21:22	0° \approx	
greatest brilliancy	-1855 Jan 07 j 09:45	2° \mathcal{E} 22'12	-1.2m			-1850 Jan 29 j 05:02	0° \mathcal{H}	
min. Earth dist.	-1855 Jan 08 j 22:36	1° \mathcal{E} 45'34	0.67058 AU			-1850 Mar 13 j 06:08	0° \mathcal{Y}	
	-1855 Jan 13 j 10:07	30° $\mathcal{R}\mathbb{I}$		asc. node		-1850 Mar 22 j 23:28	6° \mathcal{Y} 36'19	
direct	-1855 Feb 17 j 05:17	22° \mathbb{I} 30'46		evening set		-1850 Apr 11 j 08:15	19° \mathcal{Y} 35'28	
	-1855 Mar 27 j 11:46	0° \mathcal{E}				-1850 Apr 27 j 02:00	0° \mathcal{B}	
	-1855 May 28 j 16:09	0° \mathcal{Q}						
	-1855 Jul 15 j 17:55	0° \mathbb{M}		conjunction		-1850 May 31 j 15:13	22° \mathcal{B} 28'33	0°37'51
desc. node	-1855 Aug 14 j 07:47	20° \mathbb{M} 19'37		minimum elong		-1850 May 31 j 13:57	22° \mathcal{B} 26'31	0°37'52
	-1855 Aug 27 j 19:52	0° \mathcal{A}		max. Earth dist.		-1850 Jun 10 j 10:09	28° \mathcal{B} 46'22	2.65509 AU
	-1855 Oct 07 j 00:21	0° \mathbb{M}				-1850 Jun 12 j 08:02	0° \mathbb{I}	
	-1855 Nov 14 j 14:17	0° \mathcal{X}		morning rise		-1850 Jul 17 j 12:30	22° \mathbb{I} 27'31	
evening set	-1855 Dec 15 j 17:11	24° \mathcal{X} 31'55				-1850 Jul 29 j 09:29	0° \mathcal{E}	
	-1855 Dec 22 j 15:55	0° \mathcal{Z}				-1850 Sep 14 j 17:54	0° \mathcal{Q}	
	-1854 Jan 30 j 04:44	0° \approx				-1850 Nov 01 j 07:27	0° \mathbb{M}	
						-1850 Dec 19 j 17:39	0° \mathcal{A}	
conjunction	-1854 Feb 19 j 20:04	15° \approx 41'58	0°-59'-55			-1849 Feb 09 j 09:52	0° \mathbb{M}	
minimum elong	-1854 Feb 19 j 22:20	15° \approx 46'13	0°59'57	desc. node		-1849 Apr 06 j 05:20	24° \mathbb{M} 29'02	
	-1854 Mar 11 j 00:44	0° \mathcal{H}		retrograde		-1849 May 02 j 01:00	28° \mathbb{M} 19'50	
max. Earth dist.	-1854 Apr 08 j 04:25	20° \mathcal{H} 23'59	2.46513 AU	opposition		-1849 Jun 01 j 15:27	23° \mathbb{M} 12'30	-3°-46'-57
	-1854 Apr 21 j 18:45	0° \mathcal{Y}		greatest brilliancy		-1849 Jun 02 j 07:06	23° \mathbb{M} 01'43	-2.8m
morning rise	-1854 Apr 23 j 14:43	1° \mathcal{Y} 16'54		min. Earth dist.		-1849 Jun 05 j 12:15	22° \mathbb{M} 08'37	0.38672 AU

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 6

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

direct	-1849 Jul 03 j 07:43	17°♌37'10		conjunction	-1844 Sep 23 j 20:10	15°♍29'48	0°38'52
	-1849 Aug 18 j 10:06	0°♌		minimum elong	-1844 Sep 23 j 21:39	15°♍32'26	0°38'51
	-1849 Oct 09 j 07:59	0°♌			-1844 Oct 14 j 02:16	0°♌	
	-1849 Nov 23 j 09:21	0°♌		morning rise	-1844 Nov 14 j 17:14	23°♌17'02	
	-1848 Jan 06 j 17:11	0°♌			-1844 Nov 23 j 15:59	0°♌	
asc. node	-1848 Feb 07 j 22:30	21°♌31'06		desc. node	-1844 Nov 26 j 02:56	1°♌51'11	
	-1848 Feb 20 j 19:03	0°♌			-1843 Jan 01 j 22:25	0°♌	
	-1848 Apr 06 j 23:11	0°♌			-1843 Feb 09 j 15:06	0°♌	
evening set	-1848 May 21 j 22:22	28°♌42'48			-1843 Mar 20 j 14:39	0°♌	
	-1848 May 23 j 22:55	0°♌			-1843 Apr 29 j 21:50	0°♌	
max. Earth dist.	-1848 Jul 02 j 22:28	25°♌25'43	2.67196 AU		-1843 Jun 11 j 23:16	0°♌	
					-1843 Jul 31 j 00:42	0°♌	
conjunction	-1848 Jul 07 j 19:00	28°♌31'29	1°05'43	asc. node	-1843 Sep 29 j 20:16	23°♌38'47	
minimum elong	-1848 Jul 07 j 18:10	28°♌30'09	1°05'45	retrograde	-1843 Oct 12 j 05:53	24°♌37'21	
	-1848 Jul 10 j 02:28	0°♌		min. Earth dist.	-1843 Nov 17 j 17:03	16°♌04'06	0.63847 AU
morning rise	-1848 Aug 21 j 16:18	27°♌22'43		opposition	-1843 Nov 21 j 04:57	14°♌39'48	2°01'02
	-1848 Aug 25 j 17:14	0°♌		greatest brilliancy	-1843 Nov 20 j 19:17	14°♌49'30	-1.4m
	-1848 Oct 10 j 08:49	0°♌		direct	-1843 Dec 29 j 22:30	5°♌29'08	
	-1848 Nov 23 j 22:51	0°♌			-1842 Mar 18 j 02:28	0°♌	
	-1847 Jan 06 j 15:50	0°♌			-1842 May 11 j 23:38	0°♌	
	-1847 Feb 18 j 22:22	0°♌			-1842 Jun 29 j 17:28	0°♌	
desc. node	-1847 Feb 21 j 05:36	1°♌35'32			-1842 Aug 13 j 19:59	0°♌	
	-1847 Apr 03 j 23:08	0°♌		evening set	-1842 Sep 20 j 12:24	26°♌39'41	
	-1847 May 23 j 09:52	0°♌			-1842 Sep 25 j 02:26	0°♌	
retrograde	-1847 Jul 15 j 14:40	16°♌17'28		max. Earth dist.	-1842 Oct 08 j 10:46	9°♌49'49	2.42426 AU
min. Earth dist.	-1847 Aug 11 j 10:14	11°♌35'13	0.41772 AU	desc. node	-1842 Oct 14 j 02:27	14°♌02'33	
greatest brilliancy	-1847 Aug 16 j 22:29	9°♌51'03	-2.6m		-1842 Nov 04 j 05:11	0°♌	
opposition	-1847 Aug 18 j 19:19	9°♌15'31	-6°00'-16				
direct	-1847 Sep 18 j 18:56	3°♌25'52		conjunction	-1842 Nov 15 j 19:29	8°♌54'04	0°-21'-58
	-1847 Dec 05 j 09:47	0°♌		minimum elong	-1842 Nov 15 j 17:57	8°♌51'08	0°21'59
asc. node	-1847 Dec 25 j 21:20	11°♌18'53			-1842 Dec 12 j 22:33	0°♌	
	-1846 Jan 26 j 20:23	0°♌		morning rise	-1841 Jan 19 j 08:05	29°♌22'50	
	-1846 Mar 17 j 08:18	0°♌			-1841 Jan 20 j 03:01	0°♌	
	-1846 May 05 j 00:02	0°♌			-1841 Feb 27 j 15:51	0°♌	
	-1846 Jun 21 j 20:00	0°♌			-1841 Apr 08 j 09:55	0°♌	
evening set	-1846 Jun 28 j 23:31	4°♌32'44			-1841 May 20 j 06:00	0°♌	
max. Earth dist.	-1846 Jul 27 j 06:17	22°♌44'40	2.63497 AU		-1841 Jul 04 j 04:21	0°♌	
	-1846 Aug 07 j 08:58	0°♌		asc. node	-1841 Aug 17 j 18:44	26°♌49'30	
					-1841 Aug 23 j 13:00	0°♌	
conjunction	-1846 Aug 14 j 05:21	4°♌30'12	1°07'52	retrograde	-1841 Nov 15 j 23:56	29°♌08'10	
minimum elong	-1846 Aug 14 j 06:00	4°♌31'15	1°07'54	opposition	-1841 Dec 25 j 21:20	19°♌29'24	4°01'13
	-1846 Sep 21 j 05:58	0°♌		greatest brilliancy	-1841 Dec 25 j 20:44	19°♌30'00	-1.2m
morning rise	-1846 Sep 29 j 06:50	5°♌30'11		min. Earth dist.	-1841 Dec 26 j 04:35	19°♌22'08	0.67430 AU
	-1846 Nov 03 j 08:41	0°♌		direct	-1840 Feb 04 j 13:45	9°♌39'13	
	-1846 Dec 14 j 21:54	0°♌			-1840 Apr 13 j 16:43	0°♌	
desc. node	-1845 Jan 09 j 04:45	18°♌42'24			-1840 Jun 07 j 04:32	0°♌	
	-1845 Jan 24 j 07:07	0°♌			-1840 Jul 23 j 21:30	0°♌	
	-1845 Mar 05 j 03:43	0°♌		desc. node	-1840 Aug 31 j 01:33	26°♌43'34	
	-1845 Apr 14 j 11:56	0°♌			-1840 Sep 04 j 13:49	0°♌	
	-1845 May 27 j 04:47	0°♌			-1840 Oct 14 j 15:45	0°♌	
	-1845 Jul 17 j 02:42	0°♌		evening set	-1840 Nov 18 j 05:07	26°♌51'31	
retrograde	-1845 Sep 04 j 14:46	13°♌49'40			-1840 Nov 22 j 05:00	0°♌	
min. Earth dist.	-1845 Oct 06 j 05:48	6°♌59'59	0.54310 AU		-1840 Dec 30 j 05:47	0°♌	
opposition	-1845 Oct 13 j 04:43	4°♌19'33	-1°-24'-26				
greatest brilliancy	-1845 Oct 12 j 16:25	4°♌31'24	-1.9m	conjunction	-1839 Jan 23 j 09:55	18°♌56'16	-1°-6'-13
	-1845 Oct 25 j 11:06	30°♌32'21		minimum elong	-1839 Jan 23 j 09:49	18°♌56'04	1°06'16
asc. node	-1845 Nov 12 j 20:24	26°♌32'21			-1839 Feb 06 j 16:53	0°♌	
direct	-1845 Nov 17 j 16:35	26°♌22'57		max. Earth dist.	-1839 Mar 14 j 03:25	26°♌49'24	2.41200 AU
	-1845 Dec 12 j 21:54	0°♌			-1839 Mar 18 j 10:19	0°♌	
	-1844 Feb 20 j 02:07	0°♌		morning rise	-1839 Mar 31 j 14:46	9°♌39'54	
	-1844 Apr 13 j 07:09	0°♌			-1839 Apr 29 j 02:08	0°♌	
	-1844 Jun 01 j 21:14	0°♌			-1839 Jun 12 j 03:31	0°♌	
	-1844 Jul 18 j 23:08	0°♌		asc. node	-1839 Jul 04 j 17:27	14°♌41'15	
evening set	-1844 Aug 06 j 01:11	11°♌57'00			-1839 Jul 29 j 02:34	0°♌	
max. Earth dist.	-1844 Aug 23 j 21:37	23°♌59'52	2.54728 AU		-1839 Sep 18 j 14:09	0°♌	
	-1844 Sep 01 j 15:41	0°♌			-1839 Nov 28 j 00:28	0°♌	
				retrograde	-1839 Dec 20 j 23:29	2°♌55'02	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 7

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1838 Jan 11 j 06:34	30°R☿				-1833 Jan 15 j 16:29	0°K		
opposition	-1838 Jan 28 j 17:18	23°☿58'35	4°47'15	asc. node		-1833 Feb 24 j 13:48	27°K13'01		
greatest brilliancy	-1838 Jan 29 j 13:36	23°☿38'45	-1.3m			-1833 Feb 28 j 17:26	0°Y		
min. Earth dist.	-1838 Feb 01 j 21:03	22°☿21'09	0.64510 AU			-1833 Apr 15 j 05:46	0°B		
direct	-1838 Mar 10 j 23:44	13°☿57'36		evening set		-1833 May 07 j 10:38	14°B21'03		
	-1838 May 08 j 04:41	0°Q				-1833 May 31 j 20:42	0°II		
	-1838 Jun 30 j 19:51	0°P							
desc. node	-1838 Jul 18 j 23:42	11°P48'24		conjunction		-1833 Jun 24 j 06:43	14°II56'14	0°57'42	
	-1838 Aug 14 j 08:28	0°A		minimum elong		-1833 Jun 24 j 05:31	14°II54'20	0°57'44	
	-1838 Sep 24 j 01:40	0°M		max. Earth dist.		-1833 Jun 24 j 23:28	15°II22'55	2.67185 AU	
	-1838 Nov 01 j 21:22	0°J				-1833 Jul 17 j 21:48	0°S		
	-1838 Dec 10 j 03:04	0°C		morning rise		-1833 Aug 08 j 14:11	13°S51'26		
	-1837 Jan 17 j 20:14	0°≈				-1833 Sep 02 j 17:15	0°Q		
evening set	-1837 Jan 26 j 21:30	6°≈53'30				-1833 Oct 18 j 22:08	0°P		
	-1837 Feb 26 j 21:03	0°K				-1833 Dec 03 j 12:52	0°A		
						-1832 Jan 17 j 22:56	0°M		
conjunction	-1837 Mar 29 j 03:27	21°K48'18	0°-31'-49			-1832 Mar 04 j 04:35	0°J		
minimum elong	-1837 Mar 29 j 05:16	21°K51'31	0°31'49	desc. node		-1832 Mar 09 j 21:31	3°J35'22		
	-1837 Apr 09 j 19:19	0°Y				-1832 Apr 24 j 10:51	0°C		
max. Earth dist.	-1837 May 03 j 10:10	16°Y16'03	2.54214 AU	retrograde		-1832 Jun 19 j 05:11	16°C50'45		
asc. node	-1837 May 22 j 17:25	29°Y15'06		min. Earth dist.		-1832 Jul 16 j 13:14	12°C22'20	0.38390 AU	
	-1837 May 23 j 20:24	0°B		opposition		-1832 Jul 20 j 18:33	11°C11'40	-6°-45'-53	
morning rise	-1837 May 24 j 01:42	0°B08'49		greatest brilliancy		-1832 Jul 19 j 14:33	11°C31'17	-2.8m	
	-1837 Jul 08 j 23:06	0°II		direct		-1832 Aug 19 j 14:32	6°C06'55		
	-1837 Aug 26 j 03:01	0°S				-1832 Oct 29 j 09:20	0°≈		
	-1837 Oct 16 j 06:59	0°Q				-1832 Dec 19 j 13:35	0°K		
	-1837 Dec 16 j 01:34	0°P		asc. node		-1831 Jan 11 j 13:05	14°K16'08		
retrograde	-1836 Feb 01 j 19:48	10°P55'33				-1831 Feb 05 j 15:05	0°Y		
opposition	-1836 Mar 09 j 02:12	3°P09'55	3°51'29			-1831 Mar 25 j 09:23	0°B		
greatest brilliancy	-1836 Mar 10 j 14:01	2°P36'58	-1.8m			-1831 May 12 j 05:30	0°II		
min. Earth dist.	-1836 Mar 16 j 16:44	0°P22'33	0.55277 AU	evening set		-1831 Jun 14 j 07:05	20°II50'31		
	-1836 Mar 17 j 18:01	30°RQ				-1831 Jun 28 j 17:11	0°S		
direct	-1836 Apr 17 j 22:36	23°Q46'47		max. Earth dist.		-1831 Jul 17 j 10:53	11°S59'19	2.65587 AU	
	-1836 May 20 j 12:33	0°P							
desc. node	-1836 Jun 04 j 22:22	6°P16'01		conjunction		-1831 Jul 30 j 10:34	20°S22'07	1°10'24	
	-1836 Jul 17 j 13:56	0°A		minimum elong		-1831 Jul 30 j 10:35	20°S22'09	1°10'27	
	-1836 Aug 30 j 09:15	0°M				-1831 Aug 14 j 05:38	0°Q		
	-1836 Oct 09 j 13:40	0°J		morning rise		-1831 Sep 13 j 14:42	20°Q05'27		
	-1836 Nov 17 j 16:58	0°C				-1831 Sep 28 j 08:13	0°P		
	-1836 Dec 27 j 05:07	0°≈				-1831 Nov 10 j 21:47	0°A		
	-1835 Feb 06 j 00:07	0°K				-1831 Dec 23 j 02:08	0°M		
	-1835 Mar 20 j 14:41	0°Y		desc. node		-1830 Jan 25 j 21:42	24°M36'56		
evening set	-1835 Mar 23 j 22:50	2°Y17'43				-1830 Feb 02 j 05:39	0°J		
asc. node	-1835 Apr 08 j 15:57	12°Y59'38				-1830 Mar 15 j 00:08	0°C		
	-1835 May 04 j 02:50	0°B				-1830 Apr 25 j 16:56	0°≈		
						-1830 Jun 10 j 18:15	0°K		
conjunction	-1835 May 15 j 12:51	7°B30'51	0°21'07	retrograde		-1830 Aug 17 j 22:54	24°K24'08		
minimum elong	-1835 May 15 j 11:58	7°B29'24	0°21'07	min. Earth dist.		-1830 Sep 16 j 09:39	18°K25'42	0.49397 AU	
max. Earth dist.	-1835 May 31 j 13:37	17°B58'00	2.63361 AU	greatest brilliancy		-1830 Sep 23 j 02:04	15°K59'18	-2.1m	
	-1835 Jun 19 j 05:15	0°II		opposition		-1830 Sep 24 j 07:05	15°K32'39	-3°-10'-35	
morning rise	-1835 Jul 03 j 02:31	8°II53'18		direct		-1830 Oct 28 j 04:23	8°K19'21		
	-1835 Aug 05 j 09:31	0°S		asc. node		-1830 Nov 29 j 12:08	14°K08'59		
	-1835 Sep 22 j 07:43	0°Q				-1829 Jan 06 j 04:14	0°Y		
	-1835 Nov 10 j 07:51	0°P				-1829 Mar 02 j 14:49	0°B		
	-1834 Jan 01 j 10:19	0°A				-1829 Apr 22 j 09:40	0°II		
	-1834 Mar 14 j 17:32	0°M				-1829 Jun 10 j 02:59	0°S		
retrograde	-1834 Apr 01 j 13:26	1°M50'17		evening set		-1829 Jul 22 j 09:57	27°S02'48		
	-1834 Apr 18 j 19:35	30°RQ				-1829 Jul 26 j 22:20	0°Q		
desc. node	-1834 Apr 22 j 22:08	29°Q03'31		max. Earth dist.		-1829 Aug 12 j 21:18	11°Q12'21	2.58751 AU	
opposition	-1834 May 03 j 16:24	26°Q01'08	0°-41'-15						
greatest brilliancy	-1834 May 03 j 23:27	25°Q55'47	-2.6m	conjunction		-1829 Sep 07 j 17:37	28°Q40'46	0°54'13	
min. Earth dist.	-1834 May 11 j 02:47	23°Q45'47	0.42380 AU	minimum elong		-1829 Sep 07 j 19:01	28°Q43'10	0°54'13	
direct	-1834 Jun 07 j 08:48	19°Q06'51				-1829 Sep 09 j 15:48	0°P		
	-1834 Jul 19 j 23:22	0°M				-1829 Oct 22 j 07:42	0°A		
	-1834 Sep 09 j 14:48	0°J		morning rise		-1829 Oct 26 j 13:40	3°A03'45		
	-1834 Oct 22 j 22:22	0°C				-1829 Dec 02 j 05:06	0°M		
	-1834 Dec 04 j 00:07	0°≈		desc. node		-1829 Dec 13 j 21:10	8°M45'27		

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 8

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1828 Jan 10 j 19:55	0°♊		opposition	-1823 Jan 14 j 20:42	10°♊29'58	4°38'42
	-1828 Feb 18 j 20:26	0°♋		greatest brilliancy	-1823 Jan 15 j 08:12	10°♊18'35	-1.3m
	-1828 Mar 29 j 03:57	0°♌		min. Earth dist.	-1823 Jan 17 j 12:10	9°♊27'12	0.66430 AU
	-1828 May 08 j 23:01	0°♍		direct	-1823 Feb 25 j 01:46	0°♊29'19	
	-1828 Jun 22 j 06:44	0°♎			-1823 May 21 j 16:28	0°♏	
	-1828 Aug 16 j 11:34	0°♐			-1823 Jul 10 j 04:29	0°♑	
retrograde	-1828 Sep 28 j 00:54	10°♑06'27		desc. node	-1823 Aug 04 j 16:57	17°♑14'51	
asc. node	-1828 Oct 16 j 10:46	7°♑41'48			-1823 Aug 22 j 17:08	0°♒	
min. Earth dist.	-1828 Nov 01 j 18:15	2°♑09'06	0.60762 AU		-1823 Oct 02 j 01:51	0°♓	
opposition	-1828 Nov 06 j 16:33	0°♒11'09	0°52'55		-1823 Nov 09 j 17:31	0°♊	
greatest brilliancy	-1828 Nov 06 j 10:21	0°♒17'20	-1.6m		-1823 Dec 17 j 19:56	0°♋	
	-1828 Nov 07 j 03:45	30°♒♑		evening set	-1823 Dec 31 j 07:46	10°♋34'26	
direct	-1828 Dec 14 j 07:30	21°♑24'18			-1822 Jan 25 j 09:25	0°♌	
	-1827 Jan 24 j 17:50	0°♐					
	-1827 Mar 29 j 04:29	0°♑		conjunction	-1822 Mar 06 j 03:26	29°♌55'06	0°-51'-20
	-1827 May 20 j 04:39	0°♊		minimum elong	-1822 Mar 06 j 06:00	29°♌59'50	0°51'21
	-1827 Jul 07 j 02:35	0°♏			-1822 Mar 06 j 06:05	0°♍	
	-1827 Aug 20 j 23:48	0°♑			-1822 Apr 17 j 00:22	0°♎	
evening set	-1827 Sep 01 j 14:22	8°♑03'58		max. Earth dist.	-1822 Apr 18 j 16:23	1°♑09'58	2.49389 AU
max. Earth dist.	-1827 Sep 16 j 17:06	18°♑45'20	2.47452 AU	morning rise	-1822 May 05 j 08:01	12°♑41'12	
	-1827 Oct 02 j 07:08	0°♒			-1822 May 30 j 23:43	0°♐	
				asc. node	-1822 Jun 08 j 08:47	5°♐32'47	
conjunction	-1827 Oct 24 j 04:19	16°♒08'37	0°04'29		-1822 Jul 16 j 06:31	0°♑	
minimum elong	-1827 Oct 24 j 04:33	16°♒09'03	0°04'29		-1822 Sep 03 j 05:51	0°♊	
behind sun begin	-1827 Oct 23 j 05:50	15°♒26'41			-1822 Oct 27 j 07:56	0°♏	
behind sun end	-1827 Oct 25 j 03:16	16°♒51'28		retrograde	-1821 Jan 14 j 20:46	25°♏25'01	
desc. node	-1827 Oct 30 j 19:17	21°♒06'29		opposition	-1821 Feb 21 j 06:37	17°♏07'05	4°29'34
	-1827 Nov 11 j 13:33	0°♓		greatest brilliancy	-1821 Feb 22 j 14:53	16°♏36'27	-1.6m
	-1827 Dec 20 j 11:20	0°♊		min. Earth dist.	-1821 Feb 27 j 15:37	14°♏42'06	0.59587 AU
morning rise	-1827 Dec 22 j 03:13	1°♊17'46		direct	-1821 Apr 02 j 23:43	7°♏20'22	
	-1826 Jan 27 j 19:32	0°♋			-1821 Jun 11 j 11:16	0°♑	
	-1826 Mar 07 j 11:04	0°♌		desc. node	-1821 Jun 22 j 15:04	6°♑16'09	
greatest brilliancy	-1826 Mar 12 j 15:43	3°♌58'34	1.2m		-1821 Jul 30 j 01:15	0°♒	
	-1826 Apr 16 j 07:44	0°♍			-1821 Sep 10 j 01:08	0°♓	
	-1826 May 28 j 09:37	0°♎			-1821 Oct 19 j 11:22	0°♊	
	-1826 Jul 13 j 04:03	0°♐			-1821 Nov 27 j 02:52	0°♋	
asc. node	-1826 Sep 03 j 10:27	29°♐06'33			-1820 Jan 05 j 04:54	0°♌	
	-1826 Sep 05 j 07:38	0°♑			-1820 Feb 14 j 14:32	0°♍	
retrograde	-1826 Nov 02 j 15:00	16°♑15'16		evening set	-1820 Mar 03 j 15:48	12°♍59'25	
min. Earth dist.	-1826 Dec 11 j 11:14	6°♑54'56	0.66780 AU		-1820 Mar 27 j 20:42	0°♎	
opposition	-1826 Dec 12 j 16:14	6°♑25'47	3°23'36	asc. node	-1820 Apr 25 j 07:46	19°♑26'33	
greatest brilliancy	-1826 Dec 12 j 09:52	6°♑32'11	-1.3m				
	-1826 Dec 30 j 12:57	30°♑♐		conjunction	-1820 Apr 28 j 04:08	21°♑21'26	0°01'43
direct	-1825 Jan 21 j 17:52	26°♐47'50		minimum elong	-1820 Apr 28 j 03:59	21°♑21'13	0°01'44
	-1825 Feb 14 j 23:58	0°♑		behind sun begin	-1820 Apr 27 j 06:07	20°♑44'30	
	-1825 Apr 26 j 10:51	0°♊		behind sun end	-1820 Apr 29 j 01:52	21°♑57'54	
	-1825 Jun 16 j 17:30	0°♏			-1820 May 11 j 02:52	0°♐	
	-1825 Aug 01 j 14:41	0°♑		max. Earth dist.	-1820 May 21 j 04:18	6°♐38'56	2.60393 AU
	-1825 Sep 13 j 01:27	0°♒		morning rise	-1820 Jun 18 j 00:34	24°♐46'48	
desc. node	-1825 Sep 17 j 17:56	3°♒25'57			-1820 Jun 26 j 03:26	0°♑	
	-1825 Oct 23 j 02:47	0°♓			-1820 Aug 12 j 13:30	0°♊	
evening set	-1825 Oct 24 j 20:46	1°♓20'28			-1820 Sep 30 j 08:08	0°♏	
	-1825 Nov 30 j 16:55	0°♊			-1820 Nov 20 j 15:55	0°♑	
					-1819 Jan 20 j 22:23	0°♒	
conjunction	-1825 Dec 26 j 23:31	20°♊42'33	0°-57'-50	retrograde	-1819 Mar 06 j 07:02	9°♒46'04	
minimum elong	-1825 Dec 26 j 20:50	20°♊37'16	0°57'51	opposition	-1819 Apr 09 j 06:56	3°♒06'05	1°42'29
	-1824 Jan 07 j 18:22	0°♋		greatest brilliancy	-1819 Apr 10 j 04:22	2°♒48'05	-2.2m
max. Earth dist.	-1824 Jan 07 j 22:14	0°♋07'37	2.37429 AU	min. Earth dist.	-1819 Apr 17 j 18:48	0°♒15'57	0.47377 AU
	-1824 Feb 15 j 05:15	0°♌			-1819 Apr 18 j 14:38	30°♒♑	
morning rise	-1824 Mar 05 j 02:54	14°♌26'29		desc. node	-1819 May 09 j 14:10	25°♑17'14	
	-1824 Mar 25 j 21:47	0°♍		direct	-1819 May 16 j 13:15	24°♑56'56	
	-1824 May 06 j 13:13	0°♎			-1819 Jun 13 j 21:25	0°♒	
	-1824 Jun 19 j 18:39	0°♐			-1819 Aug 10 j 13:35	0°♓	
asc. node	-1824 Jul 21 j 10:13	20°♐12'09			-1819 Sep 22 j 22:56	0°♊	
	-1824 Aug 06 j 12:00	0°♑			-1819 Nov 02 j 17:08	0°♋	
	-1824 Sep 30 j 05:58	0°♊			-1819 Dec 13 j 08:25	0°♌	
retrograde	-1824 Dec 06 j 13:10	19°♊45'43			-1818 Jan 24 j 01:03	0°♍	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 9

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1818 Mar 08 j 08:40	0°♈		desc. node	-1814 Dec 30 j 13:10	15°♌23'03	
asc. node	-1818 Mar 13 j 06:07	3°♈18'50			-1813 Jan 18 j 23:05	0°♌	
evening set	-1818 Apr 21 j 03:29	29°♈11'27			-1813 Feb 27 j 11:13	0°♍	
	-1818 Apr 22 j 09:06	0°♉			-1813 Apr 08 j 08:05	0°♍	
	-1818 Jun 07 j 17:17	0°♊			-1813 May 20 j 01:52	0°♋	
					-1813 Jul 06 j 04:56	0°♈	
conjunction	-1818 Jun 09 j 09:54	1°♊05'04	0°46'06	retrograde	-1813 Sep 13 j 20:54	24°♈09'36	
minimum elong	-1818 Jun 09 j 08:34	1°♊02'57	0°46'07	min. Earth dist.	-1813 Oct 16 j 15:41	16°♈54'00	0.56801 AU
max. Earth dist.	-1818 Jun 15 j 20:53	5°♊13'05	2.66343 AU	opposition	-1813 Oct 22 j 22:13	14°♈26'39	0°-29'-51
	-1818 Jul 24 j 17:52	0°♊		greatest brilliancy	-1813 Oct 22 j 18:07	14°♈30'40	-1.8m
morning rise	-1818 Jul 25 j 14:15	0°♊32'27		asc. node	-1813 Nov 03 j 03:04	10°♈21'55	
	-1818 Sep 09 j 20:52	0°♋		direct	-1813 Nov 28 j 05:14	6°♈10'12	
	-1818 Oct 26 j 20:39	0°♌			-1812 Feb 12 j 02:00	0°♉	
	-1818 Dec 13 j 00:45	0°♌			-1812 Apr 07 j 14:18	0°♊	
	-1817 Jan 30 j 12:31	0°♌			-1812 May 27 j 21:48	0°♊	
	-1817 Mar 25 j 22:59	0°♌			-1812 Jul 14 j 06:37	0°♋	
desc. node	-1817 Mar 27 j 15:11	0°♌47'18		evening set	-1812 Aug 15 j 08:28	21°♋19'20	
retrograde	-1817 May 20 j 05:27	15°♌31'04			-1812 Aug 28 j 01:11	0°♌	
opposition	-1817 Jun 19 j 12:51	10°♌31'09	-5°-23'-43	max. Earth dist.	-1812 Aug 31 j 16:34	2°♌30'50	2.52280 AU
greatest brilliancy	-1817 Jun 19 j 17:16	10°♌28'13	-2.9m				
min. Earth dist.	-1817 Jun 20 j 12:23	10°♌15'33	0.37669 AU	conjunction	-1812 Oct 04 j 05:52	26°♌13'35	0°27'42
direct	-1817 Jul 19 j 18:50	5°♌25'22		minimum elong	-1812 Oct 04 j 07:08	26°♌15'53	0°27'40
	-1817 Sep 27 j 23:46	0°♍			-1812 Oct 09 j 11:03	0°♌	
	-1817 Nov 15 j 17:05	0°♍		desc. node	-1812 Nov 16 j 12:02	28°♌10'05	
	-1817 Dec 31 j 12:37	0°♋			-1812 Nov 18 j 22:15	0°♌	
asc. node	-1816 Jan 29 j 03:44	18°♋46'32		morning rise	-1812 Nov 27 j 07:04	6°♌20'44	
	-1816 Feb 15 j 09:21	0°♈			-1812 Dec 28 j 01:28	0°♌	
	-1816 Apr 02 j 00:34	0°♉			-1811 Feb 04 j 14:33	0°♍	
	-1816 May 19 j 06:25	0°♊			-1811 Mar 15 j 10:14	0°♍	
evening set	-1816 May 30 j 13:28	7°♊09'15			-1811 Apr 24 j 12:02	0°♋	
	-1816 Jul 05 j 12:23	0°♊			-1811 Jun 06 j 01:16	0°♈	
max. Earth dist.	-1816 Jul 08 j 05:32	1°♊43'59	2.66858 AU		-1811 Jul 23 j 09:33	0°♉	
				asc. node	-1811 Sep 20 j 02:05	27°♉48'00	
conjunction	-1816 Jul 16 j 01:01	6°♊43'41	1°08'36		-1811 Sep 27 j 19:40	0°♊	
minimum elong	-1816 Jul 16 j 00:28	6°♊42'49	1°08'38	retrograde	-1811 Oct 20 j 03:38	2°♊58'22	
	-1816 Aug 21 j 02:09	0°♋			-1811 Nov 09 j 23:01	30°♊	
morning rise	-1816 Aug 29 j 21:07	5°♋44'28		min. Earth dist.	-1811 Nov 26 j 12:03	24°♊07'22	0.65158 AU
	-1816 Oct 05 j 12:41	0°♌		opposition	-1811 Nov 29 j 04:43	23°♊02'16	2°34'53
	-1816 Nov 18 j 17:11	0°♌		greatest brilliancy	-1811 Nov 28 j 19:10	23°♊11'54	-1.4m
	-1816 Dec 31 j 19:02	0°♌		direct	-1810 Jan 07 j 11:02	13°♊40'44	
desc. node	-1815 Feb 11 j 14:32	29°♌37'44			-1810 Mar 09 j 06:29	0°♊	
	-1815 Feb 12 j 03:03	0°♌			-1810 May 06 j 03:58	0°♊	
	-1815 Mar 26 j 13:01	0°♍			-1810 Jun 24 j 16:13	0°♋	
	-1815 May 10 j 09:28	0°♍			-1810 Aug 09 j 01:12	0°♌	
	-1815 Jul 14 j 05:12	0°♋			-1810 Sep 20 j 09:40	0°♌	
retrograde	-1815 Jul 28 j 15:52	1°♋27'32		evening set	-1810 Oct 02 j 05:33	8°♌42'03	
	-1815 Aug 11 j 19:56	30°♋		desc. node	-1810 Oct 04 j 10:38	10°♌20'30	
min. Earth dist.	-1815 Aug 25 j 02:10	26°♋22'04	0.44305 AU	max. Earth dist.	-1810 Oct 25 j 23:22	26°♌32'20	2.39884 AU
greatest brilliancy	-1815 Aug 31 j 08:04	24°♋16'42	-2.4m		-1810 Oct 30 j 12:18	0°♌	
opposition	-1815 Sep 02 j 02:51	23°♋40'37	-5°-3'-50				
direct	-1815 Oct 04 j 03:37	17°♋20'19		conjunction	-1810 Nov 29 j 21:33	23°♌30'13	0°-36'-48
	-1815 Nov 22 j 19:54	0°♋		minimum elong	-1810 Nov 29 j 19:01	23°♌25'18	0°36'49
asc. node	-1815 Dec 16 j 03:07	11°♋06'01			-1810 Dec 08 j 04:45	0°♌	
	-1814 Jan 19 j 18:50	0°♈			-1809 Jan 15 j 07:56	0°♍	
	-1814 Mar 11 j 18:19	0°♉		morning rise	-1809 Feb 04 j 23:34	16°♍10'41	
	-1814 Apr 30 j 01:04	0°♊			-1809 Feb 22 j 19:22	0°♍	
	-1814 Jun 17 j 03:50	0°♊			-1809 Apr 03 j 11:51	0°♋	
evening set	-1814 Jul 07 j 10:38	12°♊54'53			-1809 May 15 j 04:29	0°♈	
max. Earth dist.	-1814 Aug 02 j 02:56	29°♊33'23	2.62018 AU		-1809 Jun 28 j 17:44	0°♉	
	-1814 Aug 02 j 19:10	0°♋		asc. node	-1809 Aug 08 j 00:55	24°♉56'41	
					-1809 Aug 16 j 18:26	0°♊	
conjunction	-1814 Aug 22 j 22:05	13°♋18'33	1°04'17		-1809 Oct 18 j 10:56	0°♊	
minimum elong	-1814 Aug 22 j 23:03	13°♋20'10	1°04'18	retrograde	-1809 Nov 23 j 18:19	6°♊55'24	
	-1814 Sep 16 j 14:58	0°♌			-1809 Dec 26 j 20:31	30°♊	
morning rise	-1814 Oct 08 j 17:42	15°♌17'17		opposition	-1808 Jan 02 j 11:50	27°♊23'50	4°18'14
	-1814 Oct 29 j 13:51	0°♌		greatest brilliancy	-1808 Jan 02 j 15:12	27°♊20'28	-1.2m
	-1814 Dec 09 j 21:02	0°♌		min. Earth dist.	-1808 Jan 03 j 14:55	26°♊56'48	0.67348 AU

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 10

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

direct	-1808 Feb 12 j 10:06	17° II 28'44		conjunction	-1803 May 24 j 21:45	16° I 40'08	0°31'12
	-1808 Apr 03 j 23:03	0° S		minimum elong	-1803 May 24 j 20:36	16° I 38'16	0°31'13
	-1808 Jun 01 j 03:42	0° Q		max. Earth dist.	-1803 Jun 06 j 08:20	24° I 42'51	2.64660 AU
	-1808 Jul 18 j 15:56	0° M			-1803 Jun 14 j 13:30	0° II	
desc. node	-1808 Aug 21 j 09:03	23° M 20'39		morning rise	-1803 Jul 11 j 10:59	17° II 11'08	
	-1808 Aug 30 j 14:52	0° A			-1803 Jul 31 j 15:37	0° S	
	-1808 Oct 09 j 19:06	0° M			-1803 Sep 17 j 05:25	0° Q	
	-1808 Nov 17 j 09:12	0° A			-1803 Nov 04 j 08:04	0° M	
evening set	-1808 Dec 03 j 14:31	12° A 47'08			-1803 Dec 24 j 00:58	0° A	
	-1808 Dec 25 j 10:20	0° S			-1802 Feb 17 j 20:44	0° M	
	-1807 Feb 01 j 21:45	0° \approx		desc. node	-1802 Apr 13 j 06:42	16° M 28'37	
				retrograde	-1802 Apr 18 j 07:01	16° M 14'50	
conjunction	-1807 Feb 08 j 04:15	4° \approx 48'41	-1°-4'-13	opposition	-1802 May 19 j 10:35	11° M 14'50	-2°-24'-18
minimum elong	-1807 Feb 08 j 05:45	4° \approx 51'34	1°04'15	greatest brilliancy	-1802 May 20 j 03:10	11° M 02'53	-2.7m
	-1807 Mar 13 j 15:39	0° H		min. Earth dist.	-1802 May 25 j 04:56	9° M 35'27	0.40080 AU
max. Earth dist.	-1807 Mar 29 j 17:22	11° H 45'40	2.44120 AU	direct	-1802 Jun 21 j 11:08	5° M 05'59	
morning rise	-1807 Apr 14 j 01:12	22° H 45'36			-1802 Aug 29 j 14:02	0° A	
	-1807 Apr 24 j 07:11	0° Y			-1802 Oct 15 j 04:13	0° S	
	-1807 Jun 07 j 06:19	0° I			-1802 Nov 27 j 14:27	0° \approx	
asc. node	-1807 Jun 25 j 00:49	11° I 39'33			-1801 Jan 10 j 01:29	0° H	
	-1807 Jul 23 j 20:49	0° II		asc. node	-1801 Feb 14 j 20:09	24° H 10'32	
	-1807 Sep 12 j 03:13	0° S			-1801 Feb 23 j 14:04	0° Y	
	-1807 Nov 11 j 09:56	0° Q			-1801 Apr 10 j 09:52	0° I	
retrograde	-1807 Dec 29 j 15:49	11° Q 08'14		evening set	-1801 May 16 j 09:44	23° I 06'45	
opposition	-1806 Feb 05 j 23:33	2° Q 23'57	4°45'30		-1801 May 27 j 04:51	0° II	
greatest brilliancy	-1806 Feb 07 j 00:31	1° Q 59'45	-1.4m	max. Earth dist.	-1801 Jun 30 j 07:53	21° II 43'48	2.67299 AU
min. Earth dist.	-1806 Feb 10 j 22:35	0° Q 28'40	0.63031 AU				
	-1806 Feb 12 j 04:33	30° R S		conjunction	-1801 Jul 02 j 15:30	23° II 12'22	1°02'49
direct	-1806 Mar 19 j 03:11	22° S 25'34		minimum elong	-1801 Jul 02 j 14:30	23° II 10'46	1°02'50
	-1806 Apr 25 j 18:03	0° Q			-1801 Jul 13 j 07:10	0° S	
	-1806 Jun 24 j 04:15	0° M		morning rise	-1801 Aug 16 j 15:44	22° S 01'20	
desc. node	-1806 Jul 09 j 08:36	9° M 30'47			-1801 Aug 29 j 00:16	0° Q	
	-1806 Aug 08 j 17:39	0° A			-1801 Oct 13 j 21:48	0° M	
	-1806 Sep 18 j 19:28	0° M			-1801 Nov 27 j 22:27	0° A	
	-1806 Oct 27 j 19:15	0° A			-1800 Jan 11 j 07:32	0° M	
	-1806 Dec 05 j 03:24	0° S			-1800 Feb 24 j 15:18	0° A	
	-1805 Jan 12 j 22:34	0° \approx		desc. node	-1800 Feb 29 j 06:57	3° A 07'10	
evening set	-1805 Feb 09 j 23:47	21° \approx 06'30			-1800 Apr 10 j 16:12	0° S	
	-1805 Feb 22 j 01:28	0° H			-1800 Jun 09 j 01:44	0° \approx	
	-1805 Apr 05 j 01:24	0° Y		retrograde	-1800 Jul 04 j 16:32	4° \approx 19'14	
					-1800 Jul 30 j 18:35	30° R S	
conjunction	-1805 Apr 10 j 01:41	3° Y 29'01	0°-19'-28	min. Earth dist.	-1800 Jul 31 j 09:02	29° S 49'29	0.39996 AU
minimum elong	-1805 Apr 10 j 02:46	3° Y 30'54	0°19'28	greatest brilliancy	-1800 Aug 05 j 00:04	28° S 26'47	-2.7m
max. Earth dist.	-1805 May 10 j 19:50	24° Y 26'59	2.56643 AU	opposition	-1800 Aug 06 j 16:49	27° S 56'14	-6°-32'-10
asc. node	-1805 May 12 j 22:55	25° Y 52'33		direct	-1800 Sep 05 j 23:49	22° S 29'50	
	-1805 May 19 j 03:16	0° I			-1800 Oct 12 j 07:42	0° \approx	
morning rise	-1805 Jun 02 j 22:21	9° I 46'38			-1800 Dec 11 j 08:54	0° H	
	-1805 Jul 04 j 03:52	0° II		asc. node	-1799 Jan 01 j 19:27	12° H 36'36	
	-1805 Aug 20 j 23:20	0° S			-1799 Jan 30 j 11:51	0° Y	
	-1805 Oct 10 j 00:42	0° Q			-1799 Mar 20 j 03:13	0° I	
	-1805 Dec 04 j 16:19	0° M			-1799 May 07 j 09:29	0° II	
retrograde	-1804 Feb 13 j 00:46	20° M 58'21		evening set	-1799 Jun 22 j 17:17	29° II 08'14	
opposition	-1804 Mar 19 j 13:54	13° M 33'26	3°15'42		-1799 Jun 24 j 01:52	0° S	
greatest brilliancy	-1804 Mar 21 j 00:03	13° M 02'45	-1.9m	max. Earth dist.	-1799 Jul 23 j 01:59	18° S 35'00	2.64534 AU
min. Earth dist.	-1804 Mar 27 j 16:42	10° M 39'26	0.52606 AU				
direct	-1804 Apr 27 j 16:50	4° M 30'32		conjunction	-1799 Aug 07 j 20:44	28° S 50'26	1°09'28
desc. node	-1804 May 26 j 07:33	9° M 29'15		minimum elong	-1799 Aug 07 j 21:06	28° S 51'02	1°09'30
	-1804 Jul 08 j 18:30	0° A			-1799 Aug 09 j 15:17	0° Q	
	-1804 Aug 23 j 17:00	0° M		morning rise	-1799 Sep 22 j 10:39	29° Q 11'09	
	-1804 Oct 03 j 15:28	0° A			-1799 Sep 23 j 15:27	0° M	
	-1804 Nov 12 j 04:34	0° S			-1799 Nov 05 j 23:47	0° A	
	-1804 Dec 21 j 23:30	0° \approx			-1799 Dec 17 j 20:00	0° M	
	-1803 Feb 01 j 00:01	0° H		desc. node	-1798 Jan 16 j 06:12	21° M 37'08	
	-1803 Mar 15 j 18:47	0° Y			-1798 Jan 27 j 13:16	0° A	
asc. node	-1803 Mar 29 j 20:55	9° Y 35'52			-1798 Mar 08 j 18:21	0° S	
evening set	-1803 Apr 03 j 15:59	12° Y 50'08			-1798 Apr 18 j 13:33	0° \approx	
	-1803 Apr 29 j 10:02	0° I			-1798 Jun 01 j 05:43	0° H	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 11

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1798 Jul 27 j 21:01	0°Υ			-1793 Sep 08 j 06:41	0°♄		
retrograde	-1798 Aug 28 j 06:47	6°Υ13'32			-1793 Oct 18 j 09:10	0°♍		
	-1798 Sep 27 j 07:29	30°♋		evening set	-1793 Nov 07 j 19:24	15°♍46'53		
min. Earth dist.	-1798 Sep 27 j 22:52	29°♋45'51	0.52152 AU		-1793 Nov 25 j 23:13	0°♌		
opposition	-1798 Oct 05 j 08:56	26°♋57'45	-2°-8'-4		-1792 Jan 03 j 00:05	0°♎		
greatest brilliancy	-1798 Oct 04 j 13:34	27°♋16'06	-2.0m					
direct	-1798 Nov 09 j 03:33	19°♋19'25		conjunction	-1792 Jan 11 j 23:15	7°♎03'15	-1°-4'-26	
asc. node	-1798 Nov 19 j 18:08	20°♋01'42		minimum elong	-1792 Jan 11 j 21:47	7°♎00'23	1°04'28	
	-1798 Dec 25 j 03:08	0°Υ			-1792 Feb 10 j 10:14	0°♏		
	-1797 Feb 24 j 00:32	0°♐		max. Earth dist.	-1792 Feb 25 j 02:38	11°♏14'45	2.39063 AU	
	-1797 Apr 17 j 01:54	0°♑		morning rise	-1792 Mar 20 j 12:31	29°♏34'52		
	-1797 Jun 05 j 07:04	0°♒			-1792 Mar 21 j 02:06	0°♋		
	-1797 Jul 22 j 07:02	0°♓			-1792 May 01 j 16:10	0°Υ		
evening set	-1797 Jul 31 j 06:22	5°♓53'49			-1792 Jun 14 j 17:22	0°♌		
max. Earth dist.	-1797 Aug 19 j 16:02	18°♓50'48	2.56608 AU	asc. node	-1792 Jul 11 j 15:13	17°♌24'13		
	-1797 Sep 05 j 00:57	0°♎			-1792 Jul 31 j 21:15	0°♑		
					-1792 Sep 22 j 08:42	0°♒		
conjunction	-1797 Sep 17 j 07:42	8°♎30'10	0°46'00	retrograde	-1792 Dec 14 j 17:42	27°♒42'02		
minimum elong	-1797 Sep 17 j 09:13	8°♎32'48	0°46'00	opposition	-1791 Jan 22 j 17:59	18°♒36'24	4°44'58	
	-1797 Oct 17 j 14:57	0°♏		greatest brilliancy	-1791 Jan 23 j 10:18	18°♒20'21	-1.3m	
morning rise	-1797 Nov 06 j 16:53	14°♏38'20		min. Earth dist.	-1791 Jan 26 j 05:07	17°♒14'39	0.65501 AU	
	-1797 Nov 27 j 08:43	0°♍		direct	-1791 Mar 05 j 00:17	8°♒34'58		
desc. node	-1797 Dec 04 j 04:30	5°♍08'01			-1791 May 13 j 16:40	0°♓		
	-1796 Jan 05 j 19:18	0°♌			-1791 Jul 04 j 08:00	0°♎		
	-1796 Feb 13 j 15:22	0°♎		desc. node	-1791 Jul 26 j 01:24	14°♎22'08		
	-1796 Mar 23 j 17:35	0°♏			-1791 Aug 17 j 11:03	0°♏		
	-1796 May 03 j 04:14	0°♋			-1791 Sep 27 j 01:13	0°♍		
	-1796 Jun 15 j 14:09	0°Υ			-1791 Nov 04 j 19:32	0°♌		
	-1796 Aug 05 j 06:26	0°♐			-1791 Dec 12 j 23:35	0°♎		
retrograde	-1796 Oct 06 j 06:24	18°♐58'49		evening set	-1790 Jan 15 j 13:04	26°♎07'12		
asc. node	-1796 Oct 06 j 17:46	18°♐58'43			-1790 Jan 20 j 14:16	0°♏		
min. Earth dist.	-1796 Nov 10 j 23:05	10°♐41'20	0.62577 AU		-1790 Mar 01 j 12:05	0°♋		
opposition	-1796 Nov 15 j 03:00	9°♐01'13	1°34'09					
greatest brilliancy	-1796 Nov 14 j 17:59	9°♐10'16	-1.5m	conjunction	-1790 Mar 19 j 12:36	13°♋07'14	0°-40'-37	
direct	-1796 Dec 23 j 09:15	0°♐00'38		minimum elong	-1790 Mar 19 j 14:53	13°♋11'20	0°40'37	
	-1795 Mar 22 j 06:33	0°♑			-1790 Apr 12 j 07:05	0°Υ		
	-1795 May 14 j 20:04	0°♒		max. Earth dist.	-1790 Apr 27 j 15:48	10°Υ39'33	2.52114 AU	
	-1795 Jul 02 j 06:15	0°♓		morning rise	-1790 May 16 j 06:38	23°Υ19'38		
	-1795 Aug 16 j 07:36	0°♎			-1790 May 26 j 05:47	0°♐		
evening set	-1795 Sep 12 j 02:22	18°♎46'45		asc. node	-1790 May 29 j 15:01	2°♐15'01		
	-1795 Sep 27 j 15:37	0°♏			-1790 Jul 11 j 08:32	0°♑		
max. Earth dist.	-1795 Sep 27 j 22:43	0°♏12'56	2.44650 AU		-1790 Aug 28 j 18:36	0°♒		
desc. node	-1795 Oct 21 j 03:58	17°♏22'59			-1790 Oct 19 j 21:31	0°♓		
					-1790 Dec 26 j 15:41	0°♎		
conjunction	-1795 Nov 05 j 14:53	29°♏03'20	0°-10'-27	retrograde	-1789 Jan 24 j 19:33	4°♎31'20		
minimum elong	-1795 Nov 05 j 14:12	29°♏02'01	0°10'28		-1789 Feb 20 j 16:42	30°♋♓		
behind sun begin	-1795 Nov 04 j 19:05	28°♏25'40		opposition	-1789 Mar 02 j 15:17	26°♓30'14	4°10'23	
behind sun end	-1795 Nov 06 j 09:19	29°♏38'23		greatest brilliancy	-1789 Mar 04 j 01:59	25°♓57'47	-1.7m	
	-1795 Nov 06 j 20:40	0°♍		min. Earth dist.	-1789 Mar 09 j 17:11	23°♓51'53	0.57311 AU	
	-1795 Dec 15 j 16:20	0°♌		direct	-1789 Apr 11 j 22:11	16°♓54'52		
morning rise	-1794 Jan 06 j 16:57	17°♌15'53			-1789 May 31 j 16:51	0°♎		
	-1794 Jan 22 j 22:21	0°♎		desc. node	-1789 Jun 12 j 23:45	6°♎02'36		
	-1794 Mar 02 j 11:39	0°♏			-1789 Jul 23 j 05:35	0°♏		
	-1794 Apr 11 j 05:46	0°♋			-1789 Sep 04 j 03:57	0°♍		
	-1794 May 23 j 02:29	0°Υ			-1789 Oct 13 j 23:48	0°♌		
	-1794 Jul 07 j 06:04	0°♐			-1789 Nov 21 j 21:13	0°♎		
asc. node	-1794 Aug 24 j 16:48	28°♐25'33			-1789 Dec 31 j 03:43	0°♏		
	-1794 Aug 27 j 16:39	0°♑			-1788 Feb 09 j 17:15	0°♋		
retrograde	-1794 Nov 10 j 07:37	24°♑07'20		evening set	-1788 Mar 15 j 10:46	24°♋40'46		
opposition	-1794 Dec 20 j 07:08	14°♑23'14	3°46'47		-1788 Mar 23 j 02:38	0°Υ		
greatest brilliancy	-1794 Dec 20 j 03:38	14°♑26'45	-1.2m	asc. node	-1788 Apr 15 j 14:00	16°Υ02'22		
min. Earth dist.	-1794 Dec 19 j 21:41	14°♑32'44	0.67271 AU		-1788 May 06 j 10:47	0°♐		
direct	-1793 Jan 29 j 17:29	4°♑38'11						
	-1793 Apr 19 j 05:21	0°♒		conjunction	-1788 May 08 j 06:25	1°♐12'15	0°13'13	
	-1793 Jun 11 j 05:55	0°♓		minimum elong	-1788 May 08 j 05:48	1°♐11'15	0°13'14	
	-1793 Jul 27 j 15:25	0°♎		behind sun begin	-1788 May 07 j 18:02	0°♐51'45		
desc. node	-1793 Sep 08 j 03:19	29°♎53'52		behind sun end	-1788 May 08 j 17:35	1°♐30'44		

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 12

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

max. Earth dist.	-1788 May 27 j 07:15	13°♄42'48	2.62128 AU	greatest brilliancy	-1783 Sep 13 j 16:06	7°♄28'53	-2.3m
	-1788 Jun 21 j 11:12	0°♂		opposition	-1783 Sep 15 j 03:57	6°♄56'58	-3°-59'-30
morning rise	-1788 Jun 26 j 18:33	3°♂24'13		direct	-1783 Oct 18 j 06:07	0°♄06'06	
	-1788 Aug 07 j 17:05	0°♄		asc. node	-1783 Dec 06 j 10:04	12°♄22'44	
	-1788 Sep 24 j 22:44	0°♂			-1782 Jan 11 j 17:46	0°♄	
	-1788 Nov 13 j 18:45	0°♄			-1782 Mar 05 j 21:28	0°♄	
	-1787 Jan 07 j 12:11	0°♄			-1782 Apr 24 j 23:18	0°♂	
retrograde	-1787 Mar 20 j 13:20	22°♄11'56			-1782 Jun 12 j 10:30	0°♄	
opposition	-1787 Apr 22 j 12:49	15°♄59'49	0°27'08	evening set	-1782 Jul 15 j 22:51	21°♄22'37	
greatest brilliancy	-1787 Apr 22 j 18:52	15°♄55'00	-2.4m		-1782 Jul 29 j 04:53	0°♂	
desc. node	-1787 Apr 29 j 23:35	13°♄37'29		max. Earth dist.	-1782 Aug 08 j 05:17	6°♂35'22	2.60315 AU
min. Earth dist.	-1787 Apr 30 j 16:49	13°♄24'07	0.44539 AU				
direct	-1787 May 28 j 11:53	8°♄29'40		conjunction	-1782 Aug 31 j 19:40	22°♂22'29	0°59'04
	-1787 Jul 30 j 18:19	0°♂		minimum elong	-1782 Aug 31 j 20:54	22°♂24'35	0°59'05
	-1787 Sep 15 j 08:13	0°♄			-1782 Sep 12 j 00:24	0°♄	
	-1787 Oct 27 j 06:42	0°♄		morning rise	-1782 Oct 18 j 15:23	25°♄34'10	
	-1787 Dec 07 j 14:04	0°♄			-1782 Oct 24 j 20:24	0°♄	
	-1786 Jan 18 j 17:41	0°♄			-1782 Dec 04 j 22:44	0°♂	
asc. node	-1786 Mar 03 j 11:44	0°♄04'20		desc. node	-1782 Dec 20 j 22:27	11°♂57'06	
	-1786 Mar 03 j 09:10	0°♄			-1781 Jan 13 j 18:39	0°♄	
	-1786 Apr 17 j 14:56	0°♄			-1781 Feb 21 j 23:56	0°♄	
evening set	-1786 Apr 30 j 14:08	8°♄26'09			-1781 Apr 02 j 11:52	0°♄	
	-1786 Jun 03 j 02:00	0°♂			-1781 May 13 j 13:43	0°♄	
					-1781 Jun 27 j 16:22	0°♄	
conjunction	-1786 Jun 18 j 00:11	9°♂32'14	0°53'16		-1781 Aug 28 j 13:18	0°♄	
minimum elong	-1786 Jun 17 j 22:54	9°♂30'13	0°53'17	retrograde	-1781 Sep 22 j 16:48	3°♄56'16	
max. Earth dist.	-1786 Jun 21 j 06:04	11°♂36'29	2.66912 AU		-1781 Oct 16 j 07:35	30°♄	
	-1786 Jul 20 j 02:34	0°♄		asc. node	-1781 Oct 24 j 08:14	27°♄09'11	
morning rise	-1786 Aug 02 j 15:29	8°♄38'03		min. Earth dist.	-1781 Oct 26 j 13:59	26°♄17'04	0.59099 AU
	-1786 Sep 05 j 01:07	0°♂		opposition	-1781 Nov 01 j 03:36	24°♄04'44	0°20'06
	-1786 Oct 21 j 13:52	0°♄		greatest brilliancy	-1781 Nov 01 j 00:50	24°♄07'29	-1.7m
	-1786 Dec 06 j 19:28	0°♄		direct	-1781 Dec 08 j 04:54	15°♄30'38	
	-1785 Jan 22 j 07:57	0°♂			-1780 Feb 02 j 06:37	0°♄	
	-1785 Mar 11 j 21:50	0°♄			-1780 Apr 01 j 13:00	0°♂	
desc. node	-1785 Mar 17 j 23:04	3°♄30'59			-1780 May 22 j 19:22	0°♄	
	-1785 May 14 j 05:24	0°♄			-1780 Jul 09 j 12:34	0°♂	
retrograde	-1785 Jun 07 j 03:30	3°♄32'13			-1780 Aug 23 j 09:50	0°♄	
	-1785 Jul 01 j 10:26	30°♄		evening set	-1780 Aug 24 j 23:57	1°♄05'40	
min. Earth dist.	-1785 Jul 05 j 19:32	28°♄51'14	0.37684 AU	max. Earth dist.	-1780 Sep 09 j 09:40	11°♄49'37	2.49671 AU
opposition	-1785 Jul 07 j 19:50	28°♄18'52	-6°-27'-38		-1780 Oct 04 j 19:34	0°♄	
greatest brilliancy	-1785 Jul 07 j 06:25	28°♄27'52	-2.9m				
direct	-1785 Aug 06 j 13:49	23°♄21'36		conjunction	-1780 Oct 15 j 05:55	7°♄37'23	0°14'57
	-1785 Sep 08 j 22:30	0°♄		minimum elong	-1780 Oct 15 j 06:43	7°♄38'51	0°14'55
	-1785 Nov 06 j 16:45	0°♄		behind sun begin	-1780 Oct 14 j 21:30	7°♄21'56	
	-1785 Dec 24 j 20:51	0°♄		behind sun end	-1780 Oct 15 j 15:55	7°♄55'47	
asc. node	-1784 Jan 19 j 10:46	16°♄20'50		desc. node	-1780 Nov 06 j 20:51	24°♄27'23	
	-1784 Feb 09 j 19:07	0°♄			-1780 Nov 14 j 04:59	0°♂	
	-1784 Mar 27 j 23:43	0°♄		morning rise	-1780 Dec 10 j 20:46	20°♄24'41	
	-1784 May 14 j 12:46	0°♂			-1780 Dec 23 j 05:37	0°♄	
evening set	-1784 Jun 08 j 00:55	15°♂28'30			-1779 Jan 30 j 16:01	0°♄	
	-1784 Jun 30 j 22:01	0°♄			-1779 Mar 10 j 08:41	0°♄	
max. Earth dist.	-1784 Jul 13 j 13:53	8°♄05'26	2.66256 AU		-1779 Apr 19 j 06:10	0°♄	
					-1779 May 31 j 10:32	0°♄	
conjunction	-1784 Jul 24 j 06:50	14°♄57'57	1°10'09		-1779 Jul 16 j 15:23	0°♄	
minimum elong	-1784 Jul 24 j 06:36	14°♄57'35	1°10'10	asc. node	-1779 Sep 10 j 07:38	29°♄30'05	
	-1784 Aug 16 j 11:29	0°♂			-1779 Sep 11 j 12:08	0°♂	
morning rise	-1784 Sep 07 j 05:47	14°♂18'14		retrograde	-1779 Oct 27 j 22:22	11°♂07'12	
	-1784 Sep 30 j 18:04	0°♄		min. Earth dist.	-1779 Dec 05 j 02:48	1°♂59'50	0.66178 AU
	-1784 Nov 13 j 14:34	0°♄		opposition	-1779 Dec 07 j 00:19	1°♂14'03	3°04'47
	-1784 Dec 26 j 04:07	0°♂		greatest brilliancy	-1779 Dec 06 j 16:02	1°♂22'23	-1.3m
desc. node	-1783 Feb 01 j 22:39	27°♄12'23			-1779 Dec 10 j 02:19	30°♄	
	-1783 Feb 05 j 19:06	0°♄		direct	-1778 Jan 15 j 18:04	21°♄43'00	
	-1783 Mar 19 j 03:53	0°♄			-1778 Feb 25 j 16:09	0°♂	
	-1783 Apr 30 j 19:56	0°♄			-1778 Apr 29 j 23:25	0°♄	
	-1783 Jun 19 j 01:04	0°♄			-1778 Jun 19 j 12:02	0°♂	
retrograde	-1783 Aug 09 j 14:13	15°♄23'15			-1778 Aug 04 j 05:11	0°♄	
min. Earth dist.	-1783 Sep 07 j 02:14	9°♄48'16	0.47107 AU		-1778 Sep 15 j 16:17	0°♄	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 13

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

desc. node	-1778 Sep 24 j 19:13	6°♄41'35			-1773 May 14 j 11:09	0°♄	
evening set	-1778 Oct 14 j 16:44	21°♄33'39		max. Earth dist.	-1773 May 17 j 15:20	2°♄06'31	2.58806 AU
	-1778 Oct 25 j 19:04	0°♄		morning rise	-1773 Jun 12 j 06:54	18°♄56'10	
max. Earth dist.	-1778 Nov 24 j 01:48	22°♄39'38	2.37888 AU		-1773 Jun 29 j 10:33	0°♄	
	-1778 Dec 03 j 10:38	0°♄			-1773 Aug 15 j 23:26	0°♄	
					-1773 Oct 04 j 04:50	0°♄	
conjunction	-1778 Dec 14 j 21:03	8°♄59'26	0°-49'-53		-1773 Nov 25 j 22:29	0°♄	
minimum elong	-1778 Dec 14 j 18:05	8°♄53'36	0°49'55		-1772 Feb 07 j 17:53	0°♄	
	-1777 Jan 10 j 12:51	0°♄		retrograde	-1772 Feb 25 j 04:44	1°♄45'12	
	-1777 Feb 17 j 23:24	0°♄			-1772 Mar 12 j 22:14	30°♄	
morning rise	-1777 Feb 21 j 14:50	2°♄48'21		opposition	-1772 Mar 30 j 22:41	24°♄44'11	2°27'33
	-1777 Mar 29 j 14:47	0°♄		greatest brilliancy	-1772 Apr 01 j 03:26	24°♄19'15	-2.1m
	-1777 May 10 j 05:13	0°♄		min. Earth dist.	-1772 Apr 08 j 10:00	21°♄48'53	0.49732 AU
	-1777 Jun 23 j 11:35	0°♄		direct	-1772 May 08 j 03:31	16°♄08'25	
asc. node	-1777 Jul 29 j 07:45	22°♄39'07		desc. node	-1772 May 16 j 15:10	16°♄37'16	
	-1777 Aug 10 j 13:54	0°♄			-1772 Jun 26 j 22:12	0°♄	
	-1777 Oct 06 j 10:09	0°♄			-1772 Aug 16 j 03:43	0°♄	
retrograde	-1777 Dec 01 j 15:21	14°♄43'46			-1772 Sep 27 j 06:15	0°♄	
opposition	-1776 Jan 10 j 03:39	5°♄20'24	4°31'24		-1772 Nov 06 j 09:40	0°♄	
greatest brilliancy	-1776 Jan 10 j 11:21	5°♄12'44	-1.2m		-1772 Dec 16 j 14:21	0°♄	
min. Earth dist.	-1776 Jan 12 j 02:22	4°♄33'58	0.66970 AU		-1771 Jan 26 j 22:10	0°♄	
	-1776 Jan 24 j 08:53	30°♄			-1771 Mar 10 j 22:39	0°♄	
direct	-1776 Feb 20 j 06:17	25°♄21'44		asc. node	-1771 Mar 20 j 03:53	6°♄16'09	
	-1776 Mar 20 j 15:57	0°♄		evening set	-1771 Apr 13 j 19:29	22°♄47'02	
	-1776 May 25 j 15:24	0°♄			-1771 Apr 24 j 17:38	0°♄	
	-1776 Jul 13 j 06:45	0°♄					
desc. node	-1776 Aug 11 j 18:06	20°♄07'20		conjunction	-1771 Jun 02 j 21:20	25°♄27'33	0°40'14
	-1776 Aug 25 j 14:40	0°♄		minimum elong	-1771 Jun 02 j 20:02	25°♄25'28	0°40'15
	-1776 Oct 04 j 22:14	0°♄			-1771 Jun 09 j 22:51	0°♄	
	-1776 Nov 12 j 13:28	0°♄		max. Earth dist.	-1771 Jun 11 j 21:41	1°♄15'10	2.65695 AU
evening set	-1776 Dec 19 j 05:42	28°♄54'16		morning rise	-1771 Jul 19 j 14:37	25°♄18'56	
	-1776 Dec 20 j 15:07	0°♄			-1771 Jul 26 j 23:34	0°♄	
greatest brilliancy	-1776 Dec 25 j 11:47	3°♄49'20	1.2m		-1771 Sep 12 j 06:48	0°♄	
	-1775 Jan 28 j 02:54	0°♄			-1771 Oct 29 j 17:19	0°♄	
					-1771 Dec 16 j 19:50	0°♄	
conjunction	-1775 Feb 23 j 04:41	19°♄48'47	0°-58'-2		-1770 Feb 05 j 12:51	0°♄	
minimum elong	-1775 Feb 23 j 07:06	19°♄53'19	0°58'03	desc. node	-1770 Apr 03 j 16:17	26°♄56'41	
	-1775 Mar 08 j 21:10	0°♄			-1770 Apr 14 j 04:54	0°♄	
max. Earth dist.	-1775 Apr 11 j 02:40	24°♄03'17	2.47060 AU	retrograde	-1770 May 05 j 23:58	2°♄49'12	
	-1775 Apr 19 j 12:54	0°♄			-1770 May 27 j 21:11	30°♄	
morning rise	-1775 Apr 26 j 11:55	4°♄51'52		opposition	-1770 Jun 05 j 12:36	27°♄44'57	-4°-11'-4
	-1775 Jun 02 j 10:28	0°♄		greatest brilliancy	-1770 Jun 06 j 03:02	27°♄35'07	-2.8m
asc. node	-1775 Jun 15 j 06:32	8°♄28'29		min. Earth dist.	-1770 Jun 08 j 21:06	26°♄50'15	0.38389 AU
	-1775 Jul 18 j 18:44	0°♄		direct	-1770 Jul 06 j 19:28	22°♄17'01	
	-1775 Sep 06 j 03:51	0°♄			-1770 Aug 11 j 08:57	0°♄	
	-1775 Nov 01 j 01:20	0°♄			-1770 Oct 05 j 20:30	0°♄	
retrograde	-1774 Jan 07 j 18:08	19°♄38'32			-1770 Nov 20 j 13:18	0°♄	
opposition	-1774 Feb 14 j 14:25	11°♄08'04	4°38'09		-1769 Jan 04 j 02:51	0°♄	
greatest brilliancy	-1774 Feb 15 j 19:32	10°♄40'08	-1.5m	asc. node	-1769 Feb 05 j 01:40	21°♄17'13	
min. Earth dist.	-1774 Feb 20 j 08:07	8°♄56'10	0.61244 AU		-1769 Feb 18 j 07:06	0°♄	
direct	-1774 Mar 27 j 13:05	1°♄15'07			-1769 Apr 05 j 12:17	0°♄	
	-1774 Jun 16 j 16:02	0°♄			-1769 May 22 j 12:41	0°♄	
desc. node	-1774 Jun 29 j 16:35	7°♄43'55		evening set	-1769 May 25 j 03:45	1°♄40'12	
	-1774 Aug 02 j 19:05	0°♄		max. Earth dist.	-1769 Jul 05 j 14:10	28°♄00'46	2.67166 AU
	-1774 Sep 13 j 09:31	0°♄			-1769 Jul 08 j 16:58	0°♄	
	-1774 Oct 22 j 15:09	0°♄					
	-1774 Nov 30 j 03:03	0°♄		conjunction	-1769 Jul 10 j 21:56	1°♄24'31	1°06'38
	-1773 Jan 08 j 01:05	0°♄		minimum elong	-1769 Jul 10 j 21:11	1°♄23'19	1°06'40
	-1773 Feb 17 j 06:23	0°♄		morning rise	-1769 Aug 24 j 18:13	0°♄15'56	
evening set	-1773 Feb 23 j 03:31	4°♄16'42			-1769 Aug 24 j 08:24	0°♄	
	-1773 Mar 31 j 08:23	0°♄			-1769 Oct 09 j 00:13	0°♄	
					-1769 Nov 22 j 13:34	0°♄	
conjunction	-1773 Apr 21 j 04:31	14°♄20'27	0°-7'-10		-1768 Jan 05 j 04:24	0°♄	
minimum elong	-1773 Apr 21 j 04:53	14°♄21'05	0°07'09		-1768 Feb 17 j 06:23	0°♄	
behind sun begin	-1773 Apr 20 j 08:25	13°♄46'16		desc. node	-1768 Feb 19 j 16:04	1°♄40'23	
behind sun end	-1773 Apr 22 j 01:21	14°♄55'51			-1768 Mar 31 j 20:36	0°♄	
asc. node	-1773 May 03 j 05:12	22°♄28'38			-1768 May 18 j 15:30	0°♄	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 14

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

retrograde	-1768 Jul 18 j 19:39	20° \approx 35'48		desc. node	-1763 Oct 11 j 12:29	13° $\underline{\Delta}$ 40'43	
min. Earth dist.	-1768 Aug 14 j 14:48	15° \approx 50'14	0.42204 AU	max. Earth dist.	-1763 Oct 11 j 17:00	13° $\underline{\Delta}$ 49'08	2.41943 AU
greatest brilliancy	-1768 Aug 20 j 08:05	14° \approx 01'11	-2.5m		-1763 Nov 02 j 03:52	0° \mathbb{M}	
opposition	-1768 Aug 22 j 04:38	13° \approx 25'28	-5°-48'-32				
direct	-1768 Sep 22 j 09:18	7° \approx 30'18		conjunction	-1763 Nov 18 j 22:24	12° \mathbb{M} 52'58	0°-25'-37
	-1768 Dec 01 j 07:41	0° \mathbb{H}		minimum elong	-1763 Nov 18 j 20:38	12° \mathbb{M} 49'33	0°25'38
asc. node	-1768 Dec 23 j 00:50	11° \mathbb{H} 39'30			-1763 Dec 10 j 22:11	0° \mathbb{Z}	
	-1767 Jan 23 j 20:34	0° \mathbb{Y}			-1762 Jan 18 j 02:34	0° \mathbb{Z}	
	-1767 Mar 14 j 16:07	0° \mathbb{B}		morning rise	-1762 Jan 22 j 23:40	3° \mathbb{Z} 49'48	
	-1767 May 02 j 11:25	0° \mathbb{H}			-1762 Feb 25 j 14:15	0° \approx	
	-1767 Jun 19 j 09:53	0° \mathbb{S}			-1762 Apr 06 j 06:09	0° \mathbb{H}	
evening set	-1767 Jul 01 j 03:29	7° \mathbb{S} 27'34			-1762 May 17 j 22:48	0° \mathbb{Y}	
max. Earth dist.	-1767 Jul 28 j 18:38	25° \mathbb{S} 15'30	2.63248 AU		-1762 Jul 01 j 15:12	0° \mathbb{B}	
	-1767 Aug 05 j 00:59	0° \mathbb{Q}		asc. node	-1762 Aug 14 j 22:45	26° \mathbb{B} 57'19	
					-1762 Aug 20 j 08:50	0° \mathbb{H}	
conjunction	-1767 Aug 16 j 09:41	7° \mathbb{Q} 28'20	1°07'02		-1762 Oct 30 j 18:56	0° \mathbb{S}	
minimum elong	-1767 Aug 16 j 10:25	7° \mathbb{Q} 29'32	1°07'02	retrograde	-1762 Nov 18 j 00:38	1° \mathbb{S} 56'29	
	-1767 Sep 18 j 23:38	0° \mathbb{M}			-1762 Dec 05 j 02:52	30° \mathbb{R} \mathbb{H}	
morning rise	-1767 Oct 01 j 13:44	8° \mathbb{M} 37'35		opposition	-1762 Dec 27 j 21:30	22° \mathbb{H} 18'42	4°06'24
	-1767 Nov 01 j 03:24	0° $\underline{\Delta}$		greatest brilliancy	-1762 Dec 27 j 21:33	22° \mathbb{H} 18'39	-1.2m
	-1767 Dec 12 j 16:55	0° \mathbb{M}		min. Earth dist.	-1762 Dec 28 j 07:49	22° \mathbb{H} 08'22	0.67438 AU
desc. node	-1766 Jan 06 j 14:30	18° \mathbb{M} 25'31		direct	-1761 Feb 06 j 15:15	12° \mathbb{H} 27'42	
	-1766 Jan 22 j 01:38	0° \mathbb{Z}			-1761 Apr 10 j 18:08	0° \mathbb{S}	
	-1766 Mar 02 j 20:41	0° \mathbb{Z}			-1761 Jun 05 j 10:29	0° \mathbb{Q}	
	-1766 Apr 12 j 01:17	0° \approx			-1761 Jul 22 j 12:12	0° \mathbb{M}	
	-1766 May 24 j 09:06	0° \mathbb{H}		desc. node	-1761 Aug 29 j 10:39	26° \mathbb{M} 26'04	
	-1766 Jul 12 j 16:52	0° \mathbb{Y}			-1761 Sep 03 j 09:01	0° $\underline{\Delta}$	
retrograde	-1766 Sep 06 j 22:40	17° \mathbb{Y} 10'02			-1761 Oct 13 j 13:31	0° \mathbb{M}	
min. Earth dist.	-1766 Oct 08 j 19:24	10° \mathbb{Y} 15'16	0.54786 AU		-1761 Nov 21 j 04:01	0° \mathbb{Z}	
opposition	-1766 Oct 15 j 15:19	7° \mathbb{Y} 36'56	-1°-9'-39	evening set	-1761 Nov 22 j 16:14	1° \mathbb{Z} 11'14	
greatest brilliancy	-1766 Oct 15 j 05:10	7° \mathbb{Y} 46'44	-1.9m		-1761 Dec 29 j 05:01	0° \mathbb{Z}	
asc. node	-1766 Nov 10 j 00:30	0° \mathbb{Y} 19'03					
	-1766 Nov 12 j 15:14	30° \mathbb{R} \mathbb{H}		conjunction	-1760 Jan 28 j 00:38	23° \mathbb{Z} 20'16	-1°-6'-8
direct	-1766 Nov 20 j 06:16	29° \mathbb{H} 36'39		minimum elong	-1760 Jan 28 j 00:56	23° \mathbb{Z} 20'50	1°06'11
	-1766 Nov 28 j 03:49	0° \mathbb{Y}			-1760 Feb 05 j 15:23	0° \approx	
	-1765 Feb 16 j 16:13	0° \mathbb{B}			-1760 Mar 16 j 07:16	0° \mathbb{H}	
	-1765 Apr 11 j 12:32	0° \mathbb{H}		max. Earth dist.	-1760 Mar 17 j 17:48	1° \mathbb{H} 03'51	2.41753 AU
	-1765 May 31 j 08:47	0° \mathbb{S}		morning rise	-1760 Apr 03 j 19:25	13° \mathbb{H} 32'59	
	-1765 Jul 17 j 14:40	0° \mathbb{Q}			-1760 Apr 26 j 20:48	0° \mathbb{Y}	
evening set	-1765 Aug 09 j 07:57	15° \mathbb{Q} 00'34			-1760 Jun 09 j 18:58	0° \mathbb{B}	
max. Earth dist.	-1765 Aug 26 j 21:16	26° \mathbb{Q} 53'09	2.54304 AU	asc. node	-1760 Jul 01 j 22:37	14° \mathbb{B} 28'09	
	-1765 Aug 31 j 10:15	0° \mathbb{M}			-1760 Jul 26 j 12:51	0° \mathbb{H}	
					-1760 Sep 15 j 11:47	0° \mathbb{S}	
conjunction	-1765 Sep 27 j 07:08	18° \mathbb{M} 46'36	0°36'07		-1760 Nov 19 j 22:50	0° \mathbb{Q}	
minimum elong	-1765 Sep 27 j 08:35	18° \mathbb{M} 49'10	0°36'07	retrograde	-1760 Dec 23 j 03:38	5° \mathbb{Q} 45'35	
	-1765 Oct 12 j 23:02	0° $\underline{\Delta}$			-1759 Jan 22 j 10:36	30° \mathbb{R} \mathbb{S}	
morning rise	-1765 Nov 18 j 13:07	26° $\underline{\Delta}$ 58'00		opposition	-1759 Jan 30 j 19:19	26° \mathbb{S} 51'03	4°46'46
	-1765 Nov 22 j 13:58	0° \mathbb{M}		greatest brilliancy	-1759 Jan 31 j 16:24	26° \mathbb{S} 30'27	-1.4m
desc. node	-1765 Nov 24 j 13:37	1° \mathbb{M} 29'46		min. Earth dist.	-1759 Feb 04 j 02:09	25° \mathbb{S} 10'43	0.64261 AU
	-1765 Dec 31 j 20:41	0° \mathbb{Z}		direct	-1759 Mar 13 j 00:56	16° \mathbb{S} 50'29	
	-1764 Feb 08 j 12:42	0° \mathbb{Z}			-1759 May 03 j 20:14	0° \mathbb{Q}	
	-1764 Mar 18 j 10:32	0° \approx			-1759 Jun 28 j 02:05	0° \mathbb{M}	
	-1764 Apr 27 j 14:28	0° \mathbb{H}		desc. node	-1759 Jul 16 j 09:54	11° \mathbb{M} 46'51	
	-1764 Jun 09 j 09:22	0° \mathbb{Y}			-1759 Aug 12 j 00:20	0° $\underline{\Delta}$	
	-1764 Jul 27 j 15:56	0° \mathbb{B}			-1759 Sep 21 j 21:39	0° \mathbb{M}	
asc. node	-1764 Sep 26 j 23:48	25° \mathbb{B} 41'59			-1759 Oct 30 j 19:06	0° \mathbb{Z}	
retrograde	-1764 Oct 14 j 06:58	27° \mathbb{B} 33'33			-1759 Dec 08 j 01:08	0° \mathbb{Z}	
min. Earth dist.	-1764 Nov 19 j 22:13	18° \mathbb{B} 57'16	0.64121 AU		-1758 Jan 15 j 17:37	0° \approx	
opposition	-1764 Nov 23 j 07:10	17° \mathbb{B} 35'55	2°11'07	evening set	-1758 Jan 30 j 06:38	11° \approx 03'17	
greatest brilliancy	-1764 Nov 22 j 21:08	17° \mathbb{B} 46'00	-1.4m		-1758 Feb 24 j 17:06	0° \mathbb{H}	
direct	-1763 Jan 01 j 03:43	8° \mathbb{B} 23'13					
	-1763 Mar 14 j 08:51	0° \mathbb{H}		conjunction	-1758 Apr 01 j 02:26	25° \mathbb{H} 27'44	0°-28'-37
	-1763 May 09 j 04:42	0° \mathbb{S}		minimum elong	-1758 Apr 01 j 04:05	25° \mathbb{H} 30'37	0°28'38
	-1763 Jun 27 j 06:26	0° \mathbb{Q}			-1758 Apr 07 j 13:37	0° \mathbb{Y}	
	-1763 Aug 11 j 13:32	0° \mathbb{M}		max. Earth dist.	-1758 May 05 j 14:53	19° \mathbb{Y} 18'33	2.54713 AU
	-1763 Sep 22 j 23:07	0° $\underline{\Delta}$		asc. node	-1758 May 19 j 21:00	28° \mathbb{Y} 53'52	
evening set	-1763 Sep 23 j 05:36	0° $\underline{\Delta}$ 11'47			-1758 May 21 j 12:39	0° \mathbb{B}	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 15

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

morning rise	-1758 May 26 j 13:42	3°♄21'12		opposition	-1753 Jul 25 j 15:30	15°♄47'26	-6°-46'-35
	-1758 Jul 06 j 12:52	0°♄		direct	-1753 Aug 24 j 11:38	10°♄39'37	
	-1758 Aug 23 j 12:47	0°♄			-1753 Oct 25 j 19:59	0°♄	
	-1758 Oct 13 j 06:57	0°♄			-1753 Dec 17 j 11:13	0°♄	
	-1758 Dec 11 j 00:49	0°♄		asc. node	-1752 Jan 09 j 17:18	14°♄17'36	
retrograde	-1757 Feb 04 j 09:10	14°♄04'45			-1752 Feb 03 j 22:02	0°♄	
opposition	-1757 Mar 12 j 13:19	6°♄22'27	3°42'25		-1752 Mar 22 j 19:57	0°♄	
greatest brilliancy	-1757 Mar 14 j 00:31	5°♄50'12	-1.8m		-1752 May 09 j 17:57	0°♄	
min. Earth dist.	-1757 Mar 20 j 06:32	3°♄33'35	0.54806 AU	evening set	-1752 Jun 16 j 11:38	23°♄46'18	
	-1757 Mar 31 j 09:08	30°♄			-1752 Jun 26 j 07:09	0°♄	
direct	-1757 Apr 21 j 06:42	27°♄02'51		max. Earth dist.	-1752 Jul 19 j 02:17	14°♄34'57	2.65405 AU
	-1757 May 13 j 03:48	0°♄					
desc. node	-1757 Jun 03 j 09:14	7°♄24'09		conjunction	-1752 Aug 01 j 14:52	23°♄19'12	1°10'16
	-1757 Jul 15 j 12:31	0°♄		minimum elong	-1752 Aug 01 j 15:00	23°♄19'25	1°10'17
	-1757 Aug 28 j 22:06	0°♄			-1752 Aug 11 j 21:04	0°♄	
	-1757 Oct 08 j 07:25	0°♄		morning rise	-1752 Sep 15 j 20:14	23°♄08'17	
	-1757 Nov 16 j 12:25	0°♄			-1752 Sep 26 j 00:52	0°♄	
	-1757 Dec 26 j 00:34	0°♄			-1752 Nov 08 j 15:06	0°♄	
	-1756 Feb 04 j 18:36	0°♄			-1752 Dec 20 j 19:18	0°♄	
	-1756 Mar 18 j 07:46	0°♄		desc. node	-1751 Jan 23 j 07:30	24°♄24'59	
evening set	-1756 Mar 26 j 15:16	5°♄42'24			-1751 Jan 30 j 21:39	0°♄	
asc. node	-1756 Apr 05 j 18:52	12°♄36'44			-1751 Mar 12 j 13:17	0°♄	
	-1756 May 01 j 18:31	0°♄			-1751 Apr 22 j 23:17	0°♄	
					-1751 Jun 07 j 02:53	0°♄	
conjunction	-1756 May 17 j 22:44	10°♄38'22	0°23'59	retrograde	-1751 Aug 20 j 12:42	28°♄03'42	
minimum elong	-1756 May 17 j 21:46	10°♄36'47	0°24'01	min. Earth dist.	-1751 Sep 19 j 05:41	21°♄59'06	0.49907 AU
max. Earth dist.	-1756 Jun 02 j 05:23	20°♄34'58	2.63637 AU	greatest brilliancy	-1751 Sep 25 j 21:48	19°♄31'36	-2.1m
	-1756 Jun 16 j 19:45	0°♄		opposition	-1751 Sep 27 j 00:36	19°♄06'47	-2°-54'-39
morning rise	-1756 Jul 05 j 06:47	11°♄48'56		direct	-1751 Oct 31 j 00:50	11°♄48'37	
	-1756 Aug 02 j 22:44	0°♄		asc. node	-1751 Nov 26 j 15:54	15°♄52'47	
	-1756 Sep 19 j 18:32	0°♄			-1750 Jan 01 j 22:26	0°♄	
	-1756 Nov 07 j 12:44	0°♄			-1750 Feb 27 j 14:58	0°♄	
	-1756 Dec 28 j 21:20	0°♄			-1750 Apr 19 j 17:58	0°♄	
	-1755 Mar 03 j 05:06	0°♄			-1750 Jun 07 j 15:22	0°♄	
retrograde	-1755 Apr 05 j 05:47	5°♄51'27		evening set	-1750 Jul 24 j 15:39	0°♄03'22	
desc. node	-1755 Apr 20 j 08:17	4°♄25'40			-1750 Jul 24 j 13:35	0°♄	
opposition	-1755 May 07 j 03:09	0°♄07'31	-1°-4'-55	max. Earth dist.	-1750 Aug 14 j 16:24	13°♄57'18	2.58351 AU
	-1755 May 07 j 13:07	30°♄			-1750 Sep 07 j 09:19	0°♄	
greatest brilliancy	-1755 May 07 j 13:32	29°♄59'41	-2.6m	conjunction	-1750 Sep 10 j 02:23	1°♄51'44	0°52'09
min. Earth dist.	-1755 May 14 j 06:09	27°♄58'39	0.41909 AU	minimum elong	-1750 Sep 10 j 03:49	1°♄54'11	0°52'09
direct	-1755 Jun 10 j 13:06	23°♄21'34			-1750 Oct 20 j 02:52	0°♄	
	-1755 Jul 12 j 22:48	0°♄		morning rise	-1750 Oct 29 j 05:07	6°♄33'44	
	-1755 Sep 06 j 07:16	0°♄			-1750 Nov 30 j 01:16	0°♄	
	-1755 Oct 20 j 05:30	0°♄		desc. node	-1750 Dec 11 j 05:56	8°♄23'44	
	-1755 Dec 01 j 12:32	0°♄			-1749 Jan 08 j 16:20	0°♄	
	-1754 Jan 13 j 06:46	0°♄			-1749 Feb 16 j 16:19	0°♄	
asc. node	-1754 Feb 21 j 18:00	26°♄55'30			-1749 Mar 27 j 22:03	0°♄	
	-1754 Feb 26 j 08:03	0°♄			-1749 May 07 j 13:03	0°♄	
	-1754 Apr 12 j 20:07	0°♄			-1749 Jun 20 j 10:45	0°♄	
evening set	-1754 May 09 j 18:02	17°♄23'00			-1749 Aug 12 j 14:47	0°♄	
	-1754 May 29 j 10:52	0°♄		retrograde	-1749 Oct 01 j 03:28	13°♄09'04	
conjunction	-1754 Jun 26 j 11:00	17°♄51'35	0°59'15	asc. node	-1749 Oct 14 j 15:02	11°♄51'39	
minimum elong	-1754 Jun 26 j 09:52	17°♄49'47	0°59'17	min. Earth dist.	-1749 Nov 05 j 01:10	5°♄08'31	0.61125 AU
max. Earth dist.	-1754 Jun 26 j 15:17	17°♄58'24	2.67235 AU	opposition	-1749 Nov 09 j 20:59	3°♄13'01	1°04'52
	-1754 Jul 15 j 12:06	0°♄		greatest brilliancy	-1749 Nov 09 j 13:38	3°♄20'20	-1.6m
morning rise	-1754 Aug 10 j 16:24	16°♄44'08			-1749 Nov 18 j 06:34	30°♄	
	-1754 Aug 31 j 07:39	0°♄		direct	-1749 Dec 17 j 15:15	24°♄23'38	
	-1754 Oct 16 j 11:56	0°♄			-1748 Jan 19 j 05:24	0°♄	
	-1754 Dec 01 j 00:25	0°♄			-1748 Mar 26 j 00:32	0°♄	
	-1753 Jan 15 j 05:15	0°♄			-1748 May 17 j 13:07	0°♄	
	-1753 Mar 01 j 22:50	0°♄			-1748 Jul 04 j 16:49	0°♄	
desc. node	-1753 Mar 08 j 08:14	4°♄05'31			-1748 Aug 18 j 17:44	0°♄	
	-1753 Apr 20 j 10:00	0°♄		evening set	-1748 Sep 04 j 02:12	11°♄22'07	
retrograde	-1753 Jun 23 j 18:37	21°♄34'01		max. Earth dist.	-1748 Sep 19 j 04:17	22°♄04'44	2.46907 AU
min. Earth dist.	-1753 Jul 20 j 22:21	17°♄07'24	0.38623 AU		-1748 Sep 30 j 03:32	0°♄	
greatest brilliancy	-1753 Jul 24 j 08:13	16°♄09'37	-2.8m				

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 16

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

conjunction	-1748 Oct 27 j 00:49	19° Ω 51'31	0°00'49		-1743 Jul 13 j 19:00	0° Π	
minimum elong	-1748 Oct 27 j 00:51	19° Ω 51'34	0°00'47		-1743 Aug 31 j 12:13	0° Θ	
behind sun begin	-1748 Oct 26 j 01:21	19° Ω 07'34			-1743 Oct 23 j 19:50	0° Ω	
behind sun end	-1748 Oct 28 j 00:21	20° Ω 35'37		retrograde	-1742 Jan 17 j 06:03	28° Ω 26'16	
desc. node	-1748 Oct 28 j 05:09	20° Ω 44'37		opposition	-1742 Feb 23 j 13:57	20° Ω 11'05	4°24'26
	-1748 Nov 09 j 11:23	0° \mathbb{M}		greatest brilliancy	-1742 Feb 24 j 22:29	19° Ω 40'15	-1.6m
	-1748 Dec 18 j 09:36	0° \mathcal{A}		min. Earth dist.	-1742 Mar 02 j 01:59	17° Ω 43'43	0.59182 AU
morning rise	-1748 Dec 25 j 14:49	5° \mathcal{A} 38'03		direct	-1742 Apr 05 j 05:17	10° Ω 26'27	
	-1747 Jan 25 j 17:26	0° \mathcal{C}			-1742 Jun 07 j 17:17	0° \mathbb{M}	
greatest brilliancy	-1747 Feb 19 j 19:48	19° \mathcal{C} 34'37	1.2m	desc. node	-1742 Jun 20 j 01:06	6° \mathbb{M} 42'05	
	-1747 Mar 05 j 07:44	0° \approx			-1742 Jul 27 j 09:53	0° Ω	
	-1747 Apr 14 j 02:08	0° \mathcal{H}			-1742 Sep 07 j 17:37	0° \mathbb{M}	
	-1747 May 26 j 00:09	0° \mathcal{Y}			-1742 Oct 17 j 07:01	0° \mathcal{A}	
	-1747 Jul 10 j 10:31	0° \mathcal{B}			-1742 Nov 24 j 23:36	0° \mathcal{C}	
asc. node	-1747 Aug 31 j 14:33	29° \mathcal{B} 37'36			-1741 Jan 03 j 01:29	0° \approx	
	-1747 Sep 01 j 08:43	0° Π			-1741 Feb 12 j 10:07	0° \mathcal{H}	
retrograde	-1747 Nov 04 j 15:02	19° Π 05'07		evening set	-1741 Mar 07 j 12:34	16° \mathcal{H} 36'00	
opposition	-1747 Dec 14 j 16:30	9° Π 16'27	3°30'37		-1741 Mar 26 j 14:47	0° \mathcal{Y}	
greatest brilliancy	-1747 Dec 14 j 10:29	9° Π 22'30	-1.3m	asc. node	-1741 Apr 23 j 11:38	19° \mathcal{Y} 04'26	
min. Earth dist.	-1747 Dec 13 j 14:26	9° Π 42'38	0.66911 AU				
	-1746 Jan 16 j 02:58	30° \mathcal{R} \mathcal{B}		conjunction	-1741 May 01 j 17:03	24° \mathcal{Y} 36'08	0°04'53
direct	-1746 Jan 23 j 20:34	29° \mathcal{B} 37'17		minimum elong	-1741 May 01 j 16:50	24° \mathcal{Y} 35'45	0°04'54
	-1746 Jan 31 j 20:32	0° Π		behind sun begin	-1741 Apr 30 j 19:49	24° \mathcal{Y} 00'35	
	-1746 Apr 23 j 05:14	0° Θ		behind sun end	-1741 May 02 j 13:51	25° \mathcal{Y} 10'54	
	-1746 Jun 14 j 03:23	0° Ω			-1741 May 09 j 19:13	0° \mathcal{B}	
	-1746 Jul 30 j 07:15	0° \mathbb{M}		max. Earth dist.	-1741 May 24 j 00:37	9° \mathcal{B} 24'01	2.60736 AU
	-1746 Sep 10 j 21:56	0° Ω		morning rise	-1741 Jun 21 j 06:54	27° \mathcal{B} 46'27	
desc. node	-1746 Sep 15 j 04:30	3° Ω 07'11			-1741 Jun 24 j 17:59	0° Π	
	-1746 Oct 21 j 01:33	0° \mathbb{M}			-1741 Aug 11 j 01:47	0° Θ	
evening set	-1746 Oct 27 j 22:55	5° \mathbb{M} 17'09			-1741 Sep 28 j 16:08	0° Ω	
	-1746 Nov 28 j 16:38	0° \mathcal{A}			-1741 Nov 18 j 12:28	0° \mathbb{M}	
					-1740 Jan 16 j 06:54	0° Ω	
conjunction	-1746 Dec 30 j 13:22	25° \mathcal{A} 07'18	0°-59'-46	retrograde	-1740 Mar 09 j 10:26	13° Ω 20'13	
minimum elong	-1746 Dec 30 j 10:53	25° \mathcal{A} 02'25	0°59'49	opposition	-1740 Apr 12 j 05:50	6° Ω 45'28	1°25'02
	-1745 Jan 05 j 17:51	0° \mathcal{C}		greatest brilliancy	-1740 Apr 13 j 00:05	6° Ω 30'18	-2.3m
max. Earth dist.	-1745 Jan 22 j 10:20	13° \mathcal{C} 06'35	2.37552 AU	min. Earth dist.	-1740 Apr 20 j 18:05	3° Ω 56'33	0.46842 AU
	-1745 Feb 13 j 03:30	0° \approx			-1740 May 05 j 16:10	30° \mathcal{R} \mathbb{M}	
morning rise	-1745 Mar 09 j 18:06	18° \approx 47'09		desc. node	-1740 May 07 j 00:45	29° \mathbb{M} 45'34	
	-1745 Mar 24 j 17:57	0° \mathcal{H}		direct	-1740 May 19 j 08:17	28° \mathbb{M} 42'58	
	-1745 May 05 j 06:33	0° \mathcal{Y}			-1740 Jun 02 j 04:31	0° Ω	
	-1745 Jun 18 j 07:58	0° \mathcal{B}			-1740 Aug 07 j 05:59	0° \mathbb{M}	
asc. node	-1745 Jul 19 j 12:56	20° \mathcal{B} 02'11			-1740 Sep 20 j 07:41	0° \mathcal{A}	
	-1745 Aug 04 j 18:04	0° Π			-1740 Oct 31 j 07:17	0° \mathcal{C}	
	-1745 Sep 27 j 12:12	0° Θ			-1740 Dec 11 j 00:32	0° \approx	
retrograde	-1745 Dec 09 j 15:33	22° Θ 35'41			-1739 Jan 21 j 17:29	0° \mathcal{H}	
opposition	-1744 Jan 17 j 21:58	13° Θ 21'31	4°40'34		-1739 Mar 06 j 00:39	0° \mathcal{Y}	
greatest brilliancy	-1744 Jan 18 j 10:20	13° Θ 09'18	-1.3m	asc. node	-1739 Mar 10 j 09:34	2° \mathcal{Y} 57'45	
min. Earth dist.	-1744 Jan 20 j 16:33	12° Θ 15'44	0.66291 AU		-1739 Apr 20 j 00:25	0° \mathcal{B}	
direct	-1744 Feb 28 j 03:40	3° Θ 20'48		evening set	-1739 Apr 23 j 13:15	2° \mathcal{B} 18'57	
	-1744 May 18 j 08:57	0° Ω			-1739 Jun 05 j 08:04	0° Π	
	-1744 Jul 07 j 15:19	0° \mathbb{M}					
desc. node	-1744 Aug 02 j 02:43	17° \mathbb{M} 05'04		conjunction	-1739 Jun 11 j 15:32	4° Π 02'37	0°48'13
	-1744 Aug 20 j 10:55	0° Ω		minimum elong	-1739 Jun 11 j 14:13	4° Π 00'30	0°48'15
	-1744 Sep 29 j 23:10	0° \mathbb{M}		max. Earth dist.	-1739 Jun 17 j 08:38	7° Π 41'54	2.66473 AU
	-1744 Nov 07 j 16:30	0° \mathcal{A}			-1739 Jul 22 j 08:10	0° Θ	
	-1744 Dec 15 j 19:14	0° \mathcal{C}		morning rise	-1739 Jul 27 j 16:52	3° Θ 24'47	
evening set	-1743 Jan 03 j 18:33	14° \mathcal{C} 51'21			-1739 Sep 07 j 10:17	0° Ω	
	-1743 Jan 23 j 07:57	0° \approx			-1739 Oct 24 j 07:51	0° \mathbb{M}	
	-1743 Mar 04 j 02:59	0° \mathcal{H}			-1739 Dec 10 j 06:41	0° Ω	
					-1738 Jan 27 j 05:46	0° \mathbb{M}	
conjunction	-1743 Mar 09 j 07:47	3° \mathcal{H} 49'36	0°-48'-49		-1738 Mar 20 j 16:21	0° \mathcal{A}	
minimum elong	-1743 Mar 09 j 10:22	3° \mathcal{H} 54'19	0°48'48	desc. node	-1738 Mar 25 j 00:25	2° \mathcal{A} 11'24	
	-1743 Apr 14 j 19:01	0° \mathcal{Y}		retrograde	-1738 May 24 j 07:28	20° \mathcal{A} 12'58	
max. Earth dist.	-1743 Apr 21 j 06:15	4° \mathcal{Y} 31'20	2.49902 AU	opposition	-1738 Jun 23 j 13:23	15° \mathcal{A} 12'05	-5°-41'-56
morning rise	-1743 May 08 j 01:29	16° \mathcal{Y} 06'34		greatest brilliancy	-1738 Jun 23 j 15:06	15° \mathcal{A} 10'57	-2.9m
	-1743 May 28 j 15:38	0° \mathcal{B}		min. Earth dist.	-1738 Jun 24 j 00:40	15° \mathcal{A} 04'38	0.37610 AU
asc. node	-1743 Jun 05 j 12:21	5° \mathcal{B} 13'17		direct	-1738 Jul 23 j 16:34	10° \mathcal{A} 09'23	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 17

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1738 Sep 23 j 10:22	0°☾			-1733 Oct 08 j 07:34	0°♊		
	-1738 Nov 12 j 15:05	0°♋		desc. node	-1733 Nov 14 j 22:37	27°♊48'37		
	-1738 Dec 28 j 20:22	0°♌			-1733 Nov 17 j 20:19	0°♌		
asc. node	-1737 Jan 26 j 08:18	18°♌37'03		morning rise	-1733 Dec 01 j 06:52	10°♌12'16		
	-1737 Feb 12 j 20:43	0°♍			-1733 Dec 27 j 00:09	0°♎		
	-1737 Mar 31 j 13:23	0°♎			-1732 Feb 03 j 12:51	0°☾		
	-1737 May 17 j 20:08	0°♏			-1732 Mar 13 j 07:04	0°♋		
evening set	-1737 Jun 02 j 17:27	10°♏03'31			-1732 Apr 22 j 05:53	0°♌		
	-1737 Jul 04 j 03:03	0°♐			-1732 Jun 03 j 13:33	0°♍		
max. Earth dist.	-1737 Jul 10 j 21:23	4°♐18'58	2.66766 AU		-1732 Jul 20 j 08:26	0°♎		
				asc. node	-1732 Sep 17 j 05:07	29°♎04'54		
conjunction	-1737 Jul 19 j 03:34	9°♐36'02	1°09'09		-1732 Sep 19 j 21:34	0°♏		
minimum elong	-1737 Jul 19 j 03:07	9°♐35'19	1°09'11	retrograde	-1732 Oct 22 j 03:51	5°♏53'02		
	-1737 Aug 19 j 17:47	0°♑			-1732 Nov 20 j 22:19	30°♏		
morning rise	-1737 Sep 01 j 23:53	8°♑39'39		min. Earth dist.	-1732 Nov 28 j 16:17	26°♏59'24	0.65383 AU	
	-1737 Oct 04 j 04:49	0°♒		opposition	-1732 Dec 01 j 06:10	25°♏57'11	2°43'56	
	-1737 Nov 17 j 08:53	0°♓		greatest brilliancy	-1732 Nov 30 j 20:32	26°♏06'51	-1.3m	
	-1737 Dec 30 j 09:05	0°♓		direct	-1731 Jan 09 j 15:40	16°♏33'47		
desc. node	-1736 Feb 09 j 23:46	29°♓34'58			-1731 Mar 04 j 18:35	0°♏		
	-1736 Feb 10 j 13:46	0°♎			-1731 May 03 j 05:57	0°♐		
	-1736 Mar 23 j 17:10	0°☾			-1731 Jun 22 j 04:11	0°♑		
	-1736 May 06 j 20:09	0°♋			-1731 Aug 06 j 18:20	0°♌		
	-1736 Jul 02 j 10:49	0°♌			-1731 Sep 18 j 05:58	0°♍		
retrograde	-1736 Jul 31 j 15:07	5°♌34'44		desc. node	-1731 Oct 01 j 20:55	10°♍00'28		
min. Earth dist.	-1736 Aug 28 j 06:16	0°♌22'47	0.44849 AU	evening set	-1731 Oct 05 j 01:22	12°♍22'20		
	-1736 Aug 29 j 09:46	30°♌			-1731 Oct 28 j 10:32	0°♎		
greatest brilliancy	-1736 Sep 03 j 13:51	28°♌14'23	-2.4m	max. Earth dist.	-1731 Oct 31 j 04:18	2°♎05'37	2.39438 AU	
opposition	-1736 Sep 05 j 07:02	27°♌39'09	-4°-48'-43					
direct	-1736 Oct 07 j 13:25	21°♌12'26		conjunction	-1731 Dec 03 j 04:38	27°♎40'34	0°-40'-6	
	-1736 Nov 16 j 19:27	0°♌		minimum elong	-1731 Dec 03 j 01:58	27°♎35'21	0°40'07	
asc. node	-1736 Dec 13 j 07:50	11°♌47'27			-1731 Dec 06 j 03:51	0°♎		
	-1735 Jan 16 j 13:04	0°♍			-1730 Jan 13 j 06:57	0°☾		
	-1735 Mar 09 j 00:27	0°♎		morning rise	-1730 Feb 08 j 16:46	20°☾40'44		
	-1735 Apr 27 j 11:53	0°♏			-1730 Feb 20 j 17:27	0°♋		
	-1735 Jun 14 j 17:33	0°♐			-1730 Apr 01 j 08:02	0°♌		
evening set	-1735 Jul 09 j 13:49	15°♐48'41			-1730 May 12 j 21:38	0°♍		
	-1735 Jul 31 j 11:16	0°♑			-1730 Jun 26 j 05:50	0°♎		
max. Earth dist.	-1735 Aug 03 j 16:11	2°♑06'00	2.61731 AU	asc. node	-1730 Aug 05 j 05:37	24°♎58'09		
					-1730 Aug 13 j 19:19	0°♏		
conjunction	-1735 Aug 25 j 02:24	16°♑17'35	1°03'01		-1730 Oct 12 j 18:16	0°♐		
minimum elong	-1735 Aug 25 j 03:26	16°♑19'20	1°03'01	retrograde	-1730 Nov 25 j 19:09	9°♐44'37		
	-1735 Sep 14 j 09:07	0°♒		opposition	-1729 Jan 04 j 12:05	0°♐14'16	4°22'12	
morning rise	-1735 Oct 11 j 02:02	18°♒28'31		greatest brilliancy	-1729 Jan 04 j 16:09	0°♐10'13	-1.2m	
	-1735 Oct 27 j 09:24	0°♓			-1729 Jan 05 j 02:24	30°♒		
	-1735 Dec 07 j 17:12	0°♓		min. Earth dist.	-1729 Jan 05 j 18:06	29°♒44'21	0.67311 AU	
desc. node	-1735 Dec 27 j 23:44	15°♓05'11		direct	-1729 Feb 14 j 11:56	20°♒18'36		
	-1734 Jan 16 j 18:54	0°♎			-1729 Mar 30 j 22:03	0°♐		
	-1734 Feb 25 j 05:33	0°☾			-1729 May 30 j 06:04	0°♑		
	-1734 Apr 05 j 23:16	0°♋			-1729 Jul 17 j 05:45	0°♌		
	-1734 May 17 j 10:08	0°♌		desc. node	-1729 Aug 19 j 19:32	23°♌06'50		
	-1734 Jul 02 j 16:29	0°♍			-1729 Aug 29 j 10:02	0°♎		
retrograde	-1734 Sep 16 j 02:41	27°♍25'50			-1729 Oct 08 j 17:07	0°♏		
min. Earth dist.	-1734 Oct 19 j 02:52	20°♍06'08	0.57270 AU		-1729 Nov 16 j 08:27	0°♎		
opposition	-1734 Oct 25 j 07:15	17°♍40'37	0°-15'-46	evening set	-1729 Dec 08 j 01:51	17°♎07'30		
greatest brilliancy	-1734 Nov 02 j 16:08	14°♍32'30	-1.8m		-1729 Dec 24 j 09:32	0°☾		
asc. node	-1734 Oct 31 j 05:54	15°♍24'37			-1728 Jan 31 j 20:00	0°♋		
direct	-1734 Nov 30 j 18:05	9°♍20'41						
	-1733 Feb 08 j 03:51	0°♎		conjunction	-1728 Feb 12 j 15:18	9°♎02'57	-1°-3'-1	
	-1733 Apr 05 j 16:55	0°♏		minimum elong	-1728 Feb 12 j 17:05	9°♎06'22	1°03'03	
	-1733 May 26 j 08:16	0°♐			-1728 Mar 11 j 12:10	0°♌		
	-1733 Jul 12 j 21:32	0°♑		max. Earth dist.	-1728 Apr 02 j 03:06	15°♌48'08	2.44675 AU	
evening set	-1733 Aug 18 j 16:16	24°♑26'40		morning rise	-1728 Apr 17 j 01:30	26°♌28'22		
	-1733 Aug 26 j 19:20	0°♒			-1728 Apr 22 j 01:26	0°♍		
max. Earth dist.	-1733 Sep 03 j 19:50	5°♒32'21	2.51821 AU		-1728 Jun 04 j 21:42	0°♎		
				asc. node	-1728 Jun 22 j 04:35	11°♎22'56		
conjunction	-1733 Oct 07 j 18:49	29°♒36'56	0°24'35		-1728 Jul 21 j 07:52	0°♏		
minimum elong	-1733 Oct 07 j 19:59	29°♒39'02	0°24'34		-1728 Sep 09 j 04:47	0°♐		

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 18

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1728 Nov 06 j 14:29	0°♈				-1722 Feb 21 j 03:36	0°♐		
retrograde	-1728 Dec 31 j 21:52	14°♈04'05				-1722 Apr 08 j 00:00	0°♌		
opposition	-1727 Feb 08 j 03:45	5°♈22'08	4°43'27	evening set		-1722 May 18 j 15:41	26°♌04'43		
greatest brilliancy	-1727 Feb 09 j 05:21	4°♈57'22	-1.4m			-1722 May 24 j 19:21	0°♊		
min. Earth dist.	-1727 Feb 13 j 05:53	3°♈24'09	0.62718 AU	max. Earth dist.		-1722 Jul 01 j 22:04	24°♊15'41	2.67308 AU	
	-1727 Feb 22 j 16:50	30°♈							
direct	-1727 Mar 21 j 06:54	25°♈24'55		conjunction		-1722 Jul 04 j 18:29	26°♊04'39	1°03'59	
	-1727 Apr 18 j 20:06	0°♈		minimum elong		-1722 Jul 04 j 17:33	26°♊03'10	1°04'01	
	-1727 Jun 21 j 04:12	0°♐				-1722 Jul 10 j 22:05	0°♈		
desc. node	-1727 Jul 06 j 18:18	9°♐36'46		morning rise		-1722 Aug 18 j 17:20	24°♈52'45		
	-1727 Aug 06 j 07:13	0°♊				-1722 Aug 26 j 15:35	0°♈		
	-1727 Sep 16 j 14:36	0°♊				-1722 Oct 11 j 13:02	0°♐		
	-1727 Oct 25 j 16:55	0°♊				-1722 Nov 25 j 12:28	0°♊		
	-1727 Dec 03 j 01:49	0°♊				-1721 Jan 08 j 18:29	0°♊		
	-1726 Jan 10 j 20:31	0°♊				-1721 Feb 21 j 19:35	0°♊		
evening set	-1726 Feb 13 j 02:33	24°♊59'16		desc. node		-1721 Feb 26 j 17:31	3°♊19'35		
	-1726 Feb 19 j 22:02	0°♋				-1721 Apr 08 j 03:18	0°♊		
	-1726 Apr 02 j 20:03	0°♐				-1721 Jun 01 j 08:59	0°♊		
				retrograde		-1721 Jul 09 j 02:00	8°♊48'08		
conjunction	-1726 Apr 12 j 19:10	6°♐55'08	0°-16'-14	min. Earth dist.		-1721 Aug 04 j 15:12	4°♊17'11	0.40346 AU	
minimum elong	-1726 Apr 12 j 20:04	6°♐56'42	0°16'14	greatest brilliancy		-1721 Aug 09 j 13:06	2°♊48'41	-2.7m	
asc. node	-1726 May 10 j 02:53	25°♐30'56		opposition		-1721 Aug 11 j 07:04	2°♊16'57	-6°-24'-43	
max. Earth dist.	-1726 May 12 j 20:45	27°♐21'16	2.57060 AU			-1721 Aug 19 j 05:30	30°♋		
	-1726 May 16 j 19:49	0°♌		direct		-1721 Sep 10 j 17:23	26°♋45'53		
morning rise	-1726 Jun 05 j 07:10	12°♌51'54				-1721 Oct 03 j 19:04	0°♋		
	-1726 Jul 01 j 18:09	0°♌				-1721 Dec 08 j 20:08	0°♋		
	-1726 Aug 18 j 10:22	0°♌		asc. node		-1721 Dec 30 j 22:29	12°♋46'07		
	-1726 Oct 07 j 04:35	0°♈				-1720 Jan 28 j 15:24	0°♐		
	-1726 Nov 30 j 18:36	0°♐				-1720 Mar 17 j 12:25	0°♌		
retrograde	-1725 Feb 15 j 19:15	24°♐17'29				-1720 May 04 j 21:35	0°♊		
opposition	-1725 Mar 23 j 05:46	16°♐56'59	3°03'50			-1720 Jun 21 j 16:05	0°♈		
greatest brilliancy	-1725 Mar 24 j 14:40	16°♐27'41	-2.0m	evening set		-1720 Jun 24 j 21:34	2°♈03'00		
min. Earth dist.	-1725 Mar 31 j 11:40	14°♐01'43	0.52053 AU	max. Earth dist.		-1720 Jul 24 j 15:32	21°♈07'08	2.64316 AU	
direct	-1725 May 01 j 05:34	7°♐59'08				-1720 Aug 07 j 07:20	0°♈		
desc. node	-1725 May 24 j 16:45	11°♐25'59							
	-1725 Jul 06 j 00:46	0°♊		conjunction		-1720 Aug 10 j 00:51	1°♈47'11	1°08'55	
	-1725 Aug 22 j 00:02	0°♊		minimum elong		-1720 Aug 10 j 01:20	1°♈47'59	1°08'56	
	-1725 Oct 02 j 06:03	0°♊				-1720 Sep 21 j 08:55	0°♐		
	-1725 Nov 10 j 22:11	0°♊		morning rise		-1720 Sep 24 j 16:40	2°♐15'28		
	-1725 Dec 20 j 18:07	0°♋				-1720 Nov 03 j 18:03	0°♊		
	-1724 Jan 30 j 18:25	0°♋				-1720 Dec 15 j 14:21	0°♊		
	-1724 Mar 13 j 12:16	0°♐		desc. node		-1719 Jan 13 j 15:51	21°♊21'48		
asc. node	-1724 Mar 27 j 02:00	9°♐15'28				-1719 Jan 25 j 06:53	0°♊		
evening set	-1724 Apr 06 j 04:15	16°♐04'10				-1719 Mar 06 j 10:00	0°♊		
	-1724 Apr 27 j 02:22	0°♌				-1719 Apr 16 j 00:44	0°♋		
						-1719 May 29 j 04:40	0°♋		
conjunction	-1724 May 27 j 04:15	19°♌39'46	0°33'45			-1719 Jul 21 j 13:37	0°♐		
minimum elong	-1724 May 27 j 03:02	19°♌37'48	0°33'47	retrograde		-1719 Aug 30 j 16:12	9°♐41'05		
max. Earth dist.	-1724 Jun 07 j 21:28	27°♌13'53	2.64874 AU	min. Earth dist.		-1719 Sep 30 j 14:15	3°♐08'30	0.52644 AU	
	-1724 Jun 12 j 04:46	0°♊		opposition		-1719 Oct 07 j 22:11	0°♐21'32	-1°-52'-40	
morning rise	-1724 Jul 13 j 13:10	20°♊02'04		greatest brilliancy		-1719 Oct 07 j 05:05	0°♐37'47	-2.0m	
	-1724 Jul 29 j 05:54	0°♈				-1719 Oct 08 j 20:59	30°♋		
	-1724 Sep 14 j 18:05	0°♈		direct		-1719 Nov 11 j 20:02	22°♋39'10		
	-1724 Nov 01 j 16:46	0°♐		asc. node		-1719 Nov 16 j 22:06	22°♋49'03		
	-1724 Dec 20 j 22:58	0°♊				-1719 Dec 19 j 00:38	0°♐		
	-1723 Feb 13 j 01:13	0°♊				-1718 Feb 20 j 19:28	0°♌		
desc. node	-1723 Apr 10 j 17:26	20°♊07'16				-1718 Apr 14 j 08:31	0°♊		
retrograde	-1723 Apr 22 j 02:24	20°♊54'48				-1718 Jun 02 j 18:53	0°♈		
opposition	-1723 May 23 j 03:40	15°♊36'12	-2°-49'-34			-1718 Jul 19 j 22:25	0°♈		
greatest brilliancy	-1723 May 23 j 21:07	15°♊23'47	-2.7m	evening set		-1718 Aug 02 j 12:26	8°♊55'31		
min. Earth dist.	-1723 May 28 j 11:39	14°♊05'25	0.39678 AU	max. Earth dist.		-1718 Aug 21 j 10:59	21°♊35'42	2.56205 AU	
direct	-1723 Jun 24 j 18:20	9°♊36'14				-1718 Sep 02 j 19:07	0°♐		
	-1723 Aug 25 j 03:42	0°♊							
	-1723 Oct 12 j 02:42	0°♊		conjunction		-1718 Sep 19 j 16:59	11°♊42'54	0°43'34	
	-1723 Nov 24 j 22:30	0°♋		minimum elong		-1718 Sep 19 j 18:28	11°♊45'31	0°43'33	
	-1722 Jan 07 j 13:27	0°♋				-1718 Oct 15 j 11:06	0°♊		
asc. node	-1722 Feb 11 j 23:55	23°♋54'33		morning rise		-1718 Nov 09 j 09:49	18°♊12'21		

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 19

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1718 Nov 25 j 05:58	0°♌		greatest brilliancy	-1712 Jan 26 j 12:31	21°♏11'46	-1.3m
desc. node	-1718 Dec 01 j 14:59	4°♌47'30		min. Earth dist.	-1712 Jan 29 j 10:00	20°♏03'36	0.65294 AU
	-1717 Jan 03 j 16:46	0°♏		direct	-1712 Mar 07 j 02:19	11°♏27'17	
	-1717 Feb 11 j 12:08	0°♐			-1712 May 09 j 21:12	0°♑	
	-1717 Mar 22 j 12:35	0°♑			-1712 Jul 01 j 15:50	0°♒	
	-1717 May 01 j 19:41	0°♒		desc. node	-1712 Jul 23 j 10:53	14°♒16'45	
	-1717 Jun 13 j 21:56	0°♓			-1712 Aug 15 j 03:08	0°♓	
	-1717 Aug 02 j 12:25	0°♓			-1712 Sep 24 j 21:02	0°♌	
asc. node	-1717 Oct 04 j 21:31	21°♓50'42			-1712 Nov 02 j 17:00	0°♏	
retrograde	-1717 Oct 09 j 07:56	21°♓58'39			-1712 Dec 10 j 21:21	0°♐	
min. Earth dist.	-1717 Nov 14 j 05:28	13°♓38'01	0.62895 AU		-1711 Jan 18 j 11:24	0°♑	
opposition	-1717 Nov 18 j 06:29	12°♓00'51	1°45'04	evening set	-1711 Jan 19 j 00:59	0°♑26'03	
greatest brilliancy	-1717 Nov 17 j 20:49	12°♓10'33	-1.5m		-1711 Feb 27 j 07:54	0°♒	
direct	-1717 Dec 26 j 16:29	2°♓57'58					
	-1716 Mar 18 j 18:50	0°♑		conjunction	-1711 Mar 22 j 14:35	16°♒55'26	0°-37'-36
	-1716 May 12 j 01:53	0°♒		minimum elong	-1711 Mar 22 j 16:45	16°♒59'19	0°37'36
	-1716 Jun 29 j 19:05	0°♑			-1711 Apr 10 j 01:06	0°♓	
	-1716 Aug 14 j 00:47	0°♒		max. Earth dist.	-1711 Apr 29 j 22:08	13°♓46'51	2.52652 AU
evening set	-1716 Sep 14 j 17:12	22°♒13'14		morning rise	-1711 May 18 j 20:45	26°♓37'44	
	-1716 Sep 25 j 11:50	0°♓			-1711 May 23 j 21:39	0°♓	
max. Earth dist.	-1716 Sep 30 j 16:09	3°♓46'45	2.44152 AU	asc. node	-1711 May 26 j 18:50	1°♓55'16	
desc. node	-1716 Oct 18 j 13:57	17°♓01'29			-1711 Jul 08 j 21:39	0°♑	
	-1716 Nov 04 j 18:50	0°♌			-1711 Aug 26 j 03:01	0°♒	
					-1711 Oct 16 j 17:32	0°♑	
conjunction	-1716 Nov 08 j 14:30	2°♌54'36	0°-14'-10		-1711 Dec 19 j 10:41	0°♒	
minimum elong	-1716 Nov 08 j 13:33	2°♌52'47	0°14'11	retrograde	-1710 Jan 27 j 06:35	7°♒36'34	
behind sun begin	-1716 Nov 08 j 01:05	2°♌29'01			-1710 Mar 04 j 01:15	30°♒♑	
behind sun end	-1716 Nov 09 j 02:01	3°♌16'33		opposition	-1710 Mar 05 j 00:27	29°♑38'30	4°03'07
	-1716 Dec 13 j 15:24	0°♏		greatest brilliancy	-1710 Mar 06 j 11:03	29°♑06'18	-1.7m
morning rise	-1715 Jan 10 j 06:16	21°♏39'26		min. Earth dist.	-1710 Mar 12 j 05:59	26°♑57'40	0.56870 AU
	-1715 Jan 20 j 21:15	0°♐		direct	-1710 Apr 14 j 05:46	20°♑05'51	
	-1715 Feb 28 j 09:23	0°♑			-1710 May 26 j 15:37	0°♒	
	-1715 Apr 09 j 01:14	0°♒		desc. node	-1710 Jun 10 j 10:44	6°♒49'09	
	-1715 May 20 j 18:15	0°♓			-1710 Jul 20 j 09:26	0°♓	
	-1715 Jul 04 j 15:05	0°♓			-1710 Sep 01 j 18:34	0°♌	
asc. node	-1715 Aug 21 j 20:28	28°♓41'42			-1710 Oct 11 j 18:24	0°♏	
	-1715 Aug 24 j 06:32	0°♑			-1710 Nov 19 j 17:05	0°♐	
retrograde	-1715 Nov 12 j 07:30	26°♑57'22			-1710 Dec 28 j 23:23	0°♑	
opposition	-1715 Dec 22 j 07:24	17°♑14'14	3°52'48		-1709 Feb 07 j 11:53	0°♒	
greatest brilliancy	-1715 Dec 22 j 04:28	17°♑17'11	-1.2m	evening set	-1709 Mar 19 j 05:56	28°♒12'44	
min. Earth dist.	-1715 Dec 22 j 01:15	17°♑20'24	0.67327 AU		-1709 Mar 21 j 19:48	0°♓	
direct	-1714 Jan 31 j 20:15	7°♑28'06		asc. node	-1709 Apr 13 j 16:32	15°♓38'58	
	-1714 Apr 15 j 14:15	0°♒			-1709 May 05 j 02:29	0°♓	
	-1714 Jun 08 j 12:39	0°♑					
	-1714 Jul 25 j 05:57	0°♒		conjunction	-1709 May 11 j 18:04	4°♓24'06	0°16'16
desc. node	-1714 Sep 05 j 11:52	29°♒35'16		minimum elong	-1709 May 11 j 17:21	4°♓22'54	0°16'16
	-1714 Sep 06 j 01:30	0°♓		max. Earth dist.	-1709 May 30 j 03:10	16°♓27'13	2.62451 AU
	-1714 Oct 16 j 06:33	0°♌			-1709 Jun 20 j 01:34	0°♑	
evening set	-1714 Nov 11 j 04:07	20°♌01'12		morning rise	-1709 Jun 29 j 23:52	6°♑22'03	
	-1714 Nov 23 j 21:55	0°♏			-1709 Aug 06 j 05:56	0°♒	
	-1714 Dec 31 j 23:02	0°♐			-1709 Sep 23 j 08:36	0°♑	
					-1709 Nov 11 j 20:57	0°♒	
conjunction	-1713 Jan 15 j 14:56	11°♐31'42	-1°-5'-16		-1708 Jan 04 j 11:26	0°♓	
minimum elong	-1713 Jan 15 j 13:54	11°♐29'40	1°05'19	retrograde	-1708 Mar 24 j 00:21	25°♓59'49	
	-1713 Feb 08 j 08:27	0°♑		opposition	-1708 Apr 25 j 17:51	19°♓53'03	0°06'06
max. Earth dist.	-1713 Mar 02 j 09:29	16°♑51'04	2.39549 AU	greatest brilliancy	-1709 Dec 02 j 05:39	11°♒50'45	-3.9m
	-1713 Mar 19 j 22:40	0°♒		desc. node	-1708 Apr 27 j 09:36	19°♓21'33	
morning rise	-1713 Mar 24 j 21:14	3°♒39'17		min. Earth dist.	-1708 May 03 j 17:38	17°♓21'45	0.44025 AU
	-1713 Apr 30 j 10:13	0°♓		direct	-1708 May 31 j 11:24	12°♓30'30	
	-1713 Jun 13 j 07:52	0°♓			-1708 Jul 26 j 08:45	0°♌	
asc. node	-1713 Jul 09 j 20:11	17°♓13'43			-1708 Sep 12 j 09:57	0°♏	
	-1713 Jul 30 j 05:48	0°♑			-1708 Oct 24 j 17:42	0°♐	
	-1713 Sep 20 j 01:18	0°♒			-1708 Dec 05 j 04:32	0°♑	
	-1713 Dec 08 j 07:41	0°♑			-1707 Jan 16 j 09:13	0°♒	
retrograde	-1713 Dec 17 j 20:16	0°♑32'30		asc. node	-1707 Feb 28 j 15:35	29°♒44'47	
	-1713 Dec 27 j 00:28	30°♒♓			-1707 Mar 01 j 00:36	0°♓	
opposition	-1712 Jan 25 j 19:22	21°♒28'36	4°45'32		-1707 Apr 15 j 05:54	0°♓	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 20

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

evening set	-1707 May 02 j 23:06	11°♄31'03			-1702 Mar 31 j 05:38	0°≈		
	-1707 May 31 j 16:36	0°♂			-1702 May 11 j 02:44	0°♄		
					-1702 Jun 24 j 16:35	0°♂		
conjunction	-1707 Jun 20 j 05:17	12°♂28'35	0°55'04		-1702 Aug 21 j 08:45	0°♄		
minimum elong	-1707 Jun 20 j 04:02	12°♂26'35	0°55'06	retrograde	-1702 Sep 24 j 19:56	7°♄01'48		
max. Earth dist.	-1707 Jun 22 j 18:59	14°♂07'00	2.67004 AU	asc. node	-1702 Oct 21 j 12:30	2°♄05'15		
	-1707 Jul 17 j 17:07	0°♄			-1702 Oct 27 j 04:04	30°♄♂		
morning rise	-1707 Aug 04 j 17:53	11°♄30'08		min. Earth dist.	-1702 Oct 28 j 21:55	29°♂19'15	0.59496 AU	
	-1707 Sep 02 j 15:28	0°♂		opposition	-1702 Nov 03 j 09:08	27°♂09'18	0°32'48	
	-1707 Oct 19 j 03:05	0°♄		greatest brilliancy	-1702 Nov 03 j 04:48	27°♂13'35	-1.6m	
	-1707 Dec 04 j 05:29	0°♂		direct	-1702 Dec 10 j 14:36	18°♂32'18		
	-1706 Jan 19 j 10:30	0°♄			-1701 Jan 28 j 09:46	0°♄		
	-1706 Mar 08 j 04:42	0°♄			-1701 Mar 30 j 12:30	0°♂		
desc. node	-1706 Mar 15 j 09:15	4°♄18'00			-1701 May 21 j 04:58	0°♄		
	-1706 May 04 j 06:23	0°♄			-1701 Jul 08 j 03:18	0°♂		
retrograde	-1706 Jun 10 j 21:46	8°♄18'39			-1701 Aug 22 j 03:58	0°♄		
min. Earth dist.	-1706 Jul 09 j 06:12	3°♄42'11	0.37780 AU	evening set	-1701 Aug 28 j 10:09	4°♄18'50		
opposition	-1706 Jul 11 j 20:01	3°♄00'16	-6°-36'-26	max. Earth dist.	-1701 Sep 12 j 13:25	14°♄53'45	2.49140 AU	
greatest brilliancy	-1706 Jul 11 j 02:51	3°♄11'56	-2.8m		-1701 Oct 03 j 16:00	0°♂		
	-1706 Jul 23 j 21:46	30°♄♄						
direct	-1706 Aug 10 j 13:40	28°♄02'21		conjunction	-1701 Oct 18 j 23:38	11°♂12'29	0°11'28	
	-1706 Aug 28 j 00:38	0°♄		minimum elong	-1701 Oct 19 j 00:16	11°♂13'39	0°11'27	
	-1706 Nov 03 j 00:30	0°≈		behind sun begin	-1701 Oct 18 j 07:46	10°♂43'13		
	-1706 Dec 21 j 23:48	0°♄		behind sun end	-1701 Oct 19 j 16:47	11°♂44'07		
asc. node	-1705 Jan 16 j 14:52	16°♄15'59		desc. node	-1701 Nov 05 j 06:33	24°♂05'05		
	-1705 Feb 07 j 04:25	0°♂			-1701 Nov 13 j 02:44	0°♄		
	-1705 Mar 26 j 11:35	0°♄		morning rise	-1701 Dec 15 j 04:09	24°♄34'43		
	-1705 May 13 j 02:00	0°♂			-1701 Dec 22 j 03:49	0°♄		
evening set	-1705 Jun 11 j 05:27	18°♂23'31			-1700 Jan 29 j 13:49	0°♄		
	-1705 Jun 29 j 12:29	0°♄			-1700 Mar 08 j 05:15	0°≈		
max. Earth dist.	-1705 Jul 16 j 07:39	10°♄43'51	2.66119 AU		-1700 Apr 17 j 00:24	0°♄		
					-1700 May 29 j 00:30	0°♂		
conjunction	-1705 Jul 27 j 10:20	17°♄52'29	1°10'17		-1700 Jul 13 j 19:54	0°♄		
minimum elong	-1705 Jul 27 j 10:13	17°♄52'17	1°10'20		-1700 Sep 06 j 21:42	0°♂		
	-1705 Aug 15 j 03:14	0°♂		asc. node	-1700 Sep 07 j 12:29	0°♂16'33		
morning rise	-1705 Sep 10 j 09:57	17°♂16'51		retrograde	-1700 Oct 29 j 21:32	13°♂57'15		
	-1705 Sep 29 j 10:51	0°♄		min. Earth dist.	-1700 Dec 07 j 06:13	4°♂47'22	0.66353 AU	
	-1705 Nov 12 j 07:47	0°♂		opposition	-1700 Dec 09 j 00:30	4°♂04'53	3°12'29	
	-1705 Dec 24 j 20:49	0°♄		greatest brilliancy	-1700 Dec 08 j 16:27	4°♂12'58	-1.3m	
desc. node	-1704 Jan 31 j 08:53	27°♄03'22			-1700 Dec 19 j 15:14	30°♄♄		
	-1704 Feb 04 j 10:03	0°♄		direct	-1699 Jan 17 j 21:35	24°♄32'18		
	-1704 Mar 16 j 14:52	0°♄			-1699 Feb 19 j 06:23	0°♂		
	-1704 Apr 27 j 21:20	0°≈			-1699 Apr 26 j 21:42	0°♄		
	-1704 Jun 14 j 12:31	0°♄			-1699 Jun 16 j 23:03	0°♂		
retrograde	-1704 Aug 12 j 06:42	19°♄12'58			-1699 Aug 01 j 22:09	0°♄		
min. Earth dist.	-1704 Sep 10 j 01:05	13°♄32'01	0.47622 AU		-1699 Sep 13 j 12:50	0°♂		
greatest brilliancy	-1704 Sep 16 j 15:40	11°♄10'23	-2.2m	desc. node	-1699 Sep 22 j 05:59	6°♂22'33		
opposition	-1704 Sep 18 j 01:36	10°♄39'53	-3°-43'-27	evening set	-1699 Oct 17 j 15:10	25°♂21'12		
direct	-1704 Oct 21 j 06:39	3°♄43'45			-1699 Oct 23 j 17:40	0°♄		
asc. node	-1704 Dec 03 j 13:37	13°♄32'59			-1699 Dec 01 j 10:04	0°♄		
	-1703 Jan 08 j 01:14	0°♂		max. Earth dist.	-1699 Dec 02 j 07:06	0°♄41'16	2.37606 AU	
	-1703 Mar 03 j 00:38	0°♄						
	-1703 Apr 22 j 08:56	0°♂		conjunction	-1699 Dec 18 j 08:08	13°♄18'50	0°-52'-32	
	-1703 Jun 09 j 23:38	0°♄		minimum elong	-1699 Dec 18 j 05:13	13°♄13'04	0°52'33	
evening set	-1703 Jul 18 j 03:52	24°♄20'28			-1698 Jan 08 j 11:59	0°♄		
	-1703 Jul 26 j 20:37	0°♂			-1698 Feb 15 j 21:17	0°≈		
max. Earth dist.	-1703 Aug 09 j 21:16	9°♂13'40	2.59955 AU	morning rise	-1698 Feb 25 j 08:20	7°≈16'49		
					-1698 Mar 27 j 10:37	0°♄		
conjunction	-1703 Sep 03 j 02:54	25°♂28'38	0°57'20		-1698 May 07 j 22:10	0°♂		
minimum elong	-1703 Sep 03 j 04:12	25°♂30'50	0°57'20		-1698 Jun 21 j 00:16	0°♄		
	-1703 Sep 09 j 18:12	0°♄		asc. node	-1698 Jul 26 j 11:06	22°♄33'24		
morning rise	-1703 Oct 21 j 04:09	28°♄56'25			-1698 Aug 07 j 18:09	0°♂		
	-1703 Oct 22 j 15:45	0°♂			-1698 Oct 02 j 05:44	0°♄		
	-1703 Dec 02 j 19:01	0°♄		retrograde	-1698 Dec 03 j 16:04	17°♄32'46		
desc. node	-1703 Dec 18 j 07:28	11°♄35'35		opposition	-1697 Jan 12 j 04:14	8°♄10'51	4°34'04	
	-1702 Jan 11 j 15:09	0°♄		greatest brilliancy	-1697 Jan 12 j 12:45	8°♄02'24	-1.3m	
	-1702 Feb 19 j 19:46	0°♄		min. Earth dist.	-1697 Jan 14 j 06:23	7°♄21'07	0.66884 AU	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 21

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1697 Feb 05 j 15:44	30° RII				-1692 Mar 08 j 14:54	0° Y		
direct	-1697 Feb 22 j 08:38	28° II 11'55		asc. node		-1692 Mar 17 j 07:51	5° Y 55'39		
	-1697 Mar 12 j 02:31	0° S		evening set		-1692 Apr 16 j 06:12	25° Y 57'47		
	-1697 May 23 j 12:30	0° Q				-1692 Apr 22 j 09:01	0° B		
	-1697 Jul 11 j 18:42	0° M							
desc. node	-1697 Aug 10 j 04:20	19° M 56'16		conjunction		-1692 Jun 05 j 03:16	28° B 26'30	0°42'33	
	-1697 Aug 24 j 08:52	0° A		minimum elong		-1692 Jun 05 j 01:57	28° B 24'23	0°42'34	
	-1697 Oct 03 j 19:42	0° M				-1692 Jun 07 j 13:27	0° II		
	-1697 Nov 11 j 12:31	0° A		max. Earth dist.		-1692 Jun 13 j 10:16	3° II 45'57	2.65859 AU	
greatest brilliancy	-1697 Dec 15 j 21:09	27° A 04'18	1.2m	morning rise		-1692 Jul 21 j 17:13	28° II 11'34		
	-1697 Dec 19 j 14:24	0° S				-1692 Jul 24 j 13:28	0° S		
evening set	-1697 Dec 23 j 16:35	3° S 13'06				-1692 Sep 09 j 19:27	0° Q		
	-1696 Jan 27 j 01:18	0° A				-1692 Oct 27 j 03:04	0° M		
						-1692 Dec 13 j 22:37	0° A		
conjunction	-1696 Feb 27 j 11:50	23° A 51'57	0°-55'-58			-1691 Feb 01 j 20:17	0° M		
minimum elong	-1696 Feb 27 j 14:21	23° A 56'40	0°56'00	desc. node		-1691 Apr 01 j 01:45	29° M 05'11		
	-1696 Mar 06 j 17:50	0° H				-1691 Apr 03 j 12:50	0° A		
max. Earth dist.	-1696 Apr 13 j 23:09	27° H 38'52	2.47592 AU	retrograde		-1691 May 10 j 01:24	7° A 20'36		
	-1696 Apr 17 j 07:12	0° Y		opposition		-1691 Jun 09 j 10:21	2° A 18'18	-4°-33'-57	
morning rise	-1696 Apr 29 j 08:17	8° Y 24'54		greatest brilliancy		-1691 Jun 09 j 23:29	2° A 09'27	-2.8m	
	-1696 May 31 j 01:55	0° B		min. Earth dist.		-1691 Jun 12 j 07:39	1° A 31'43	0.38189 AU	
asc. node	-1696 Jun 12 j 09:57	8° B 10'14				-1691 Jun 18 j 05:18	30° RM		
	-1696 Jul 16 j 06:24	0° II		direct		-1691 Jul 10 j 10:28	26° M 56'26		
	-1696 Sep 03 j 08:20	0° S				-1691 Aug 01 j 06:12	0° A		
	-1696 Oct 28 j 04:54	0° Q				-1691 Oct 02 j 06:11	0° S		
retrograde	-1695 Jan 10 j 00:44	22° Q 36'18				-1691 Nov 17 j 17:16	0° A		
opposition	-1695 Feb 16 j 19:35	14° Q 08'22	4°34'26			-1690 Jan 01 j 13:03	0° H		
greatest brilliancy	-1695 Feb 18 j 01:16	13° Q 39'59	-1.5m	asc. node		-1690 Feb 02 j 06:10	21° H 04'41		
min. Earth dist.	-1695 Feb 22 j 17:08	11° Q 53'19	0.60885 AU			-1690 Feb 15 j 19:40	0° Y		
direct	-1695 Mar 29 j 17:51	4° Q 16'55				-1690 Apr 03 j 01:44	0° B		
	-1695 Jun 13 j 07:35	0° M				-1690 May 20 j 02:42	0° II		
desc. node	-1695 Jun 27 j 02:44	8° M 00'17		evening set		-1690 May 27 j 08:24	4° II 35'43		
	-1695 Jul 31 j 05:53	0° A				-1690 Jul 06 j 07:41	0° S		
	-1695 Sep 11 j 02:53	0° M		max. Earth dist.		-1690 Jul 07 j 05:10	0° S 34'15	2.67111 AU	
	-1695 Oct 20 j 11:21	0° A							
	-1695 Nov 28 j 00:13	0° S		conjunction		-1690 Jul 13 j 00:39	4° S 16'50	1°07'27	
	-1694 Jan 05 j 22:00	0° A		minimum elong		-1690 Jul 12 j 23:58	4° S 15'45	1°07'29	
	-1694 Feb 15 j 02:13	0° H				-1690 Aug 21 j 23:48	0° Q		
evening set	-1694 Feb 26 j 02:51	8° H 00'42		morning rise		-1690 Aug 26 j 20:48	3° Q 10'02		
	-1694 Mar 29 j 02:32	0° Y				-1690 Oct 06 j 15:48	0° M		
						-1690 Nov 20 j 04:19	0° A		
conjunction	-1694 Apr 23 j 19:24	17° Y 40'26	0°-3'-56			-1689 Jan 02 j 16:51	0° M		
minimum elong	-1694 Apr 23 j 19:38	17° Y 40'49	0°03'57			-1689 Feb 14 j 14:25	0° A		
behind sun begin	-1694 Apr 22 j 21:42	17° Y 03'38		desc. node		-1689 Feb 17 j 00:53	1° A 42'22		
behind sun end	-1694 Apr 24 j 17:33	18° Y 17'58				-1689 Mar 29 j 19:16	0° S		
asc. node	-1694 Apr 30 j 09:24	22° Y 07'33				-1689 May 15 j 07:34	0° A		
	-1694 May 12 j 03:22	0° B		retrograde		-1689 Jul 22 j 22:20	24° A 53'11		
max. Earth dist.	-1694 May 19 j 14:05	4° B 56'43	2.59179 AU	min. Earth dist.		-1689 Aug 18 j 21:00	20° A 02'07	0.42702 AU	
morning rise	-1694 Jun 14 j 14:19	21° B 58'43		greatest brilliancy		-1689 Aug 24 j 17:15	18° A 09'08	-2.5m	
	-1694 Jun 27 j 00:40	0° II		opposition		-1689 Aug 26 j 13:05	17° A 33'27	-5°-35'-38	
	-1694 Aug 13 j 10:52	0° S		direct		-1689 Sep 26 j 23:59	11° A 31'53		
	-1694 Oct 01 j 11:01	0° Q				-1689 Nov 27 j 22:22	0° H		
	-1694 Nov 22 j 13:21	0° M		asc. node		-1689 Dec 21 j 05:32	12° H 04'34		
	-1693 Jan 27 j 23:14	0° A				-1688 Jan 21 j 20:11	0° Y		
retrograde	-1693 Feb 28 j 03:25	5° A 10'21				-1688 Mar 12 j 00:15	0° B		
	-1693 Mar 29 j 10:42	30° RM				-1688 Apr 29 j 23:15	0° II		
opposition	-1693 Apr 03 j 17:13	28° M 14'10	2°12'46			-1688 Jun 17 j 00:12	0° S		
greatest brilliancy	-1693 Apr 04 j 19:52	27° M 51'15	-2.1m	evening set		-1688 Jul 03 j 06:50	10° S 20'32		
min. Earth dist.	-1693 Apr 12 j 06:16	25° M 18'40	0.49198 AU	max. Earth dist.		-1688 Jul 30 j 08:48	27° S 48'30	2.62986 AU	
direct	-1693 May 11 j 19:03	19° M 43'47				-1688 Aug 02 j 17:25	0° Q		
desc. node	-1693 May 15 j 02:12	19° M 48'14							
	-1693 Jun 22 j 16:20	0° A		conjunction		-1688 Aug 18 j 13:40	10° Q 25'15	1°06'03	
	-1693 Aug 14 j 04:43	0° M		minimum elong		-1688 Aug 18 j 14:29	10° Q 26'36	1°06'05	
	-1693 Sep 25 j 18:11	0° A				-1688 Sep 16 j 17:51	0° M		
	-1693 Nov 05 j 01:30	0° S		morning rise		-1688 Oct 03 j 20:59	11° M 44'53		
	-1693 Dec 15 j 07:25	0° A				-1688 Oct 29 j 22:46	0° A		
	-1692 Jan 25 j 15:09	0° H				-1688 Dec 10 j 12:34	0° M		

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 22

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

desc. node	-1687 Jan 04 j 00:56	18° \mathbb{M} 08'49		direct	-1682 Feb 08 j 17:52	15° \mathbb{I} 17'11	
	-1687 Jan 19 j 20:39	0° \mathcal{Z}			-1682 Apr 06 j 12:04	0° \mathfrak{S}	
	-1687 Feb 28 j 13:56	0° \mathfrak{S}			-1682 Jun 02 j 15:10	0° \mathcal{Q}	
	-1687 Apr 09 j 14:50	0° \approx			-1682 Jul 20 j 02:39	0° \mathfrak{M}	
	-1687 May 21 j 14:13	0° \mathcal{H}		desc. node	-1682 Aug 26 j 20:37	26° \mathfrak{M} 10'03	
	-1687 Jul 08 j 15:09	0° \mathcal{Y}			-1682 Sep 01 j 04:22	0° $\underline{\mathfrak{A}}$	
retrograde	-1687 Sep 09 j 06:04	20° \mathcal{Y} 31'29			-1682 Oct 11 j 11:29	0° \mathbb{M}	
min. Earth dist.	-1687 Oct 11 j 08:27	13° \mathcal{Y} 32'31	0.55290 AU		-1682 Nov 19 j 03:07	0° \mathcal{Z}	
opposition	-1687 Oct 18 j 02:37	10° \mathcal{Y} 55'33	0°-54'-45	evening set	-1682 Nov 26 j 02:50	5° \mathcal{Z} 29'51	
greatest brilliancy	-1687 Oct 17 j 18:40	11° \mathcal{Y} 03'15	-1.8m		-1682 Dec 27 j 04:06	0° \mathfrak{S}	
asc. node	-1687 Nov 07 j 03:59	4° \mathcal{Y} 31'37					
direct	-1687 Nov 22 j 22:11	2° \mathcal{Y} 51'18		conjunction	-1681 Jan 31 j 14:46	27° \mathfrak{S} 43'21	-1°-5'-45
	-1686 Feb 13 j 03:20	0° \mathcal{B}		minimum elong	-1681 Jan 31 j 15:30	27° \mathfrak{S} 44'46	1°05'48
	-1686 Apr 08 j 17:30	0° \mathbb{I}			-1681 Feb 03 j 13:30	0° \approx	
	-1686 May 28 j 20:17	0° \mathfrak{S}			-1681 Mar 15 j 03:39	0° \mathcal{H}	
	-1686 Jul 15 j 06:06	0° \mathcal{Q}		max. Earth dist.	-1681 Mar 22 j 21:06	5° \mathcal{H} 42'23	2.42295 AU
evening set	-1686 Aug 11 j 14:36	18° \mathcal{Q} 04'03		morning rise	-1681 Apr 07 j 23:55	17° \mathcal{H} 26'26	
max. Earth dist.	-1686 Aug 28 j 19:11	29° \mathcal{Q} 43'46	2.53867 AU		-1681 Apr 25 j 14:50	0° \mathcal{Y}	
	-1686 Aug 29 j 04:40	0° \mathfrak{M}			-1681 Jun 08 j 09:53	0° \mathcal{B}	
				asc. node	-1681 Jun 30 j 02:24	14° \mathcal{B} 13'25	
conjunction	-1686 Sep 29 j 17:58	22° \mathfrak{M} 03'40	0°33'18		-1681 Jul 24 j 22:50	0° \mathbb{I}	
minimum elong	-1686 Sep 29 j 19:21	22° \mathfrak{M} 06'08	0°33'16		-1681 Sep 13 j 10:09	0° \mathfrak{S}	
	-1686 Oct 10 j 19:42	0° $\underline{\mathfrak{A}}$			-1681 Nov 14 j 15:16	0° \mathcal{Q}	
	-1686 Nov 20 j 12:04	0° \mathbb{M}		retrograde	-1681 Dec 26 j 07:48	8° \mathcal{Q} 39'57	
morning rise	-1686 Nov 21 j 09:26	0° \mathbb{M} 40'13		opposition	-1680 Feb 02 j 22:30	29° \mathfrak{S} 47'34	4°45'48
desc. node	-1686 Nov 22 j 00:08	1° \mathbb{M} 07'52			-1680 Feb 02 j 09:44	30° $\mathcal{R}\mathfrak{S}$	
	-1686 Dec 29 j 19:20	0° \mathcal{Z}		greatest brilliancy	-1680 Feb 03 j 20:22	29° \mathfrak{S} 26'17	-1.4m
	-1685 Feb 06 j 10:55	0° \mathfrak{S}		min. Earth dist.	-1680 Feb 07 j 08:59	28° \mathfrak{S} 04'01	0.63997 AU
	-1685 Mar 17 j 07:07	0° \approx		direct	-1680 Mar 15 j 04:54	19° \mathfrak{S} 47'42	
	-1685 Apr 26 j 07:49	0° \mathcal{H}			-1680 Apr 28 j 21:21	0° \mathcal{Q}	
	-1685 Jun 07 j 20:24	0° \mathcal{Y}			-1680 Jun 25 j 05:33	0° \mathfrak{M}	
	-1685 Jul 25 j 10:10	0° \mathcal{B}		desc. node	-1680 Jul 13 j 19:41	11° \mathfrak{M} 47'46	
asc. node	-1685 Sep 25 j 02:46	27° \mathcal{B} 30'58			-1680 Aug 09 j 15:03	0° $\underline{\mathfrak{A}}$	
	-1685 Oct 08 j 12:06	0° \mathbb{I}			-1680 Sep 19 j 17:15	0° \mathbb{M}	
retrograde	-1685 Oct 17 j 07:59	0° \mathbb{I} 30'26			-1680 Oct 28 j 16:53	0° \mathcal{Z}	
	-1685 Oct 25 j 22:27	30° $\mathcal{R}\mathcal{B}$			-1680 Dec 05 j 23:28	0° \mathfrak{S}	
min. Earth dist.	-1685 Nov 23 j 03:52	21° \mathcal{B} 51'10	0.64396 AU		-1679 Jan 13 j 15:17	0° \approx	
opposition	-1685 Nov 26 j 09:49	20° \mathcal{B} 32'57	2°20'58	evening set	-1679 Feb 02 j 12:35	15° \approx 05'56	
greatest brilliancy	-1685 Nov 25 j 23:32	20° \mathcal{B} 43'16	-1.4m		-1679 Feb 22 j 13:16	0° \mathcal{H}	
direct	-1684 Jan 04 j 10:04	11° \mathcal{B} 18'01					
	-1684 Mar 10 j 10:02	0° \mathbb{I}		conjunction	-1679 Apr 03 j 22:59	29° \mathcal{H} 02'29	0°-25'-26
	-1684 May 06 j 08:49	0° \mathfrak{S}		minimum elong	-1679 Apr 04 j 00:27	29° \mathcal{H} 05'04	0°25'25
	-1684 Jun 24 j 19:06	0° \mathcal{Q}			-1679 Apr 05 j 07:47	0° \mathcal{Y}	
	-1684 Aug 09 j 06:54	0° \mathfrak{M}		max. Earth dist.	-1679 May 07 j 16:34	22° \mathcal{Y} 16'16	2.55174 AU
	-1684 Sep 20 j 19:31	0° $\underline{\mathfrak{A}}$		asc. node	-1679 May 17 j 00:27	28° \mathcal{Y} 32'47	
evening set	-1684 Sep 25 j 22:57	3° $\underline{\mathfrak{A}}$ 44'59			-1679 May 19 j 04:36	0° \mathcal{B}	
desc. node	-1684 Oct 08 j 22:17	13° $\underline{\mathfrak{A}}$ 19'12		morning rise	-1679 May 29 j 00:48	6° \mathcal{B} 32'26	
max. Earth dist.	-1684 Oct 15 j 06:57	18° $\underline{\mathfrak{A}}$ 04'02	2.41440 AU		-1679 Jul 04 j 02:20	0° \mathbb{I}	
	-1684 Oct 31 j 02:08	0° \mathbb{M}			-1679 Aug 20 j 22:26	0° \mathfrak{S}	
					-1679 Oct 10 j 07:36	0° \mathcal{Q}	
conjunction	-1684 Nov 22 j 02:22	16° \mathbb{M} 55'07	0°-29'-13		-1679 Dec 06 j 10:22	0° \mathfrak{M}	
minimum elong	-1684 Nov 22 j 00:21	16° \mathbb{M} 51'13	0°29'14	retrograde	-1678 Feb 07 j 01:04	17° \mathfrak{M} 19'37	
	-1684 Dec 08 j 21:19	0° \mathcal{Z}		opposition	-1678 Mar 15 j 02:55	9° \mathfrak{M} 41'24	3°32'39
	-1683 Jan 16 j 01:43	0° \mathfrak{S}		greatest brilliancy	-1678 Mar 16 j 13:32	9° \mathfrak{M} 09'54	-1.8m
morning rise	-1683 Jan 26 j 16:41	8° \mathfrak{S} 20'22		min. Earth dist.	-1678 Mar 22 j 23:50	6° \mathfrak{M} 50'22	0.54283 AU
	-1683 Feb 23 j 12:28	0° \approx		direct	-1678 Apr 23 j 18:17	0° \mathfrak{M} 25'48	
	-1683 Apr 04 j 02:26	0° \mathcal{H}		desc. node	-1678 May 31 j 18:15	8° \mathfrak{M} 44'12	
	-1683 May 15 j 15:52	0° \mathcal{Y}			-1678 Jul 12 j 05:22	0° $\underline{\mathfrak{A}}$	
	-1683 Jun 29 j 02:35	0° \mathcal{B}			-1678 Aug 26 j 08:05	0° \mathbb{M}	
asc. node	-1683 Aug 12 j 03:08	27° \mathcal{B} 03'37			-1678 Oct 05 j 23:22	0° \mathcal{Z}	
	-1683 Aug 17 j 06:35	0° \mathbb{I}			-1678 Nov 14 j 06:49	0° \mathfrak{S}	
	-1683 Oct 21 j 14:36	0° \mathfrak{S}			-1678 Dec 23 j 19:34	0° \approx	
retrograde	-1683 Nov 20 j 00:31	4° \mathfrak{S} 45'37			-1677 Feb 02 j 13:04	0° \mathcal{H}	
	-1683 Dec 17 j 01:57	30° $\mathcal{R}\mathbb{I}$			-1677 Mar 17 j 01:03	0° \mathcal{Y}	
opposition	-1683 Dec 29 j 21:38	25° \mathbb{I} 09'05	4°11'11	evening set	-1677 Mar 30 j 05:44	9° \mathcal{Y} 02'57	
greatest brilliancy	-1683 Dec 29 j 22:21	25° \mathbb{I} 08'22	-1.2m	asc. node	-1677 Apr 03 j 23:38	12° \mathcal{Y} 16'30	
min. Earth dist.	-1683 Dec 30 j 11:20	24° \mathbb{I} 55'24	0.67447 AU		-1677 Apr 30 j 10:24	0° \mathcal{B}	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 23

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

conjunction	-1677 May 21 j 06:41	13°♄42'18	0°26'45		-1672 Aug 07 j 13:24	0°♄	
minimum elong	-1677 May 21 j 05:38	13°♄40'35	0°26'45	retrograde	-1672 Aug 23 j 00:20	1°♄39'47	
max. Earth dist.	-1677 Jun 04 j 22:49	23°♄14'19	2.63891 AU		-1672 Sep 07 j 01:01	30°♄♂	
	-1677 Jun 15 j 10:23	0°♄		min. Earth dist.	-1672 Sep 21 j 23:19	25°♄30'20	0.50414 AU
morning rise	-1677 Jul 08 j 09:59	14°♄42'42		opposition	-1672 Sep 29 j 17:06	22°♄38'02	-2°-38'-41
	-1677 Aug 01 j 12:09	0°♄		greatest brilliancy	-1672 Sep 28 j 16:32	23°♄00'52	-2.1m
	-1677 Sep 18 j 05:50	0°♄		direct	-1672 Nov 02 j 20:57	15°♄15'21	
	-1677 Nov 05 j 18:46	0°♄		asc. node	-1672 Nov 23 j 19:34	17°♄50'38	
	-1677 Dec 26 j 12:05	0°♄			-1672 Dec 28 j 07:57	0°♄	
	-1676 Feb 24 j 15:29	0°♄			-1671 Feb 24 j 13:45	0°♄	
retrograde	-1676 Apr 08 j 20:56	9°♄56'32			-1671 Apr 17 j 01:56	0°♄	
desc. node	-1676 Apr 17 j 18:11	9°♄26'41			-1671 Jun 05 j 03:53	0°♄	
opposition	-1676 May 10 j 15:06	4°♄17'51	-1°-29'-2		-1671 Jul 22 j 05:22	0°♄	
greatest brilliancy	-1676 May 11 j 04:14	4°♄08'01	-2.6m	evening set	-1671 Jul 26 j 20:55	3°♄02'15	
min. Earth dist.	-1676 May 17 j 10:40	2°♄15'59	0.41419 AU	max. Earth dist.	-1671 Aug 16 j 07:49	16°♄34'57	2.57975 AU
	-1676 May 25 j 23:29	30°♄♂			-1671 Sep 05 j 03:39	0°♄	
direct	-1676 Jun 13 j 15:37	27°♄41'00					
	-1676 Jul 02 j 05:51	0°♄		conjunction	-1671 Sep 12 j 10:01	4°♄59'34	0°50'01
	-1676 Sep 02 j 17:27	0°♄		minimum elong	-1671 Sep 12 j 11:29	5°♄02'05	0°50'01
	-1676 Oct 17 j 09:29	0°♄			-1671 Oct 17 j 23:00	0°♄	
	-1676 Nov 28 j 22:54	0°♄		morning rise	-1671 Oct 31 j 19:17	10°♄00'05	
	-1675 Jan 10 j 19:48	0°♄			-1671 Nov 27 j 22:24	0°♄	
asc. node	-1675 Feb 18 j 21:54	26°♄38'36		desc. node	-1671 Dec 08 j 16:20	8°♄03'18	
	-1675 Feb 23 j 22:04	0°♄			-1670 Jan 06 j 13:36	0°♄	
	-1675 Apr 10 j 10:22	0°♄			-1670 Feb 14 j 12:52	0°♄	
evening set	-1675 May 12 j 01:15	20°♄24'12			-1670 Mar 25 j 16:44	0°♄	
	-1675 May 27 j 01:11	0°♄			-1670 May 05 j 03:48	0°♄	
					-1670 Jun 17 j 16:23	0°♄	
conjunction	-1675 Jun 28 j 14:30	20°♄45'22	1°00'41		-1670 Aug 08 j 06:27	0°♄	
minimum elong	-1675 Jun 28 j 13:25	20°♄43'37	1°00'43	retrograde	-1670 Oct 03 j 05:43	16°♄10'41	
max. Earth dist.	-1675 Jun 28 j 02:41	20°♄26'32	2.67281 AU	asc. node	-1670 Oct 11 j 19:18	15°♄39'54	
	-1675 Jul 13 j 02:36	0°♄		min. Earth dist.	-1670 Nov 07 j 08:34	8°♄06'38	0.61483 AU
morning rise	-1675 Aug 12 j 17:56	19°♄35'32		opposition	-1670 Nov 12 j 01:15	6°♄14'19	1°16'33
	-1675 Aug 28 j 22:17	0°♄		greatest brilliancy	-1670 Nov 11 j 16:57	6°♄22'35	-1.5m
	-1675 Oct 14 j 02:07	0°♄			-1670 Nov 30 j 00:04	30°♄♄	
	-1675 Nov 28 j 12:45	0°♄		direct	-1670 Dec 19 j 23:40	27°♄22'12	
	-1674 Jan 12 j 13:09	0°♄			-1669 Jan 10 j 13:20	0°♄	
	-1674 Feb 26 j 20:39	0°♄			-1669 Mar 23 j 18:19	0°♄	
desc. node	-1674 Mar 05 j 18:40	4°♄29'39			-1669 May 15 j 20:48	0°♄	
	-1674 Apr 15 j 23:34	0°♄			-1669 Jul 03 j 06:44	0°♄	
retrograde	-1674 Jun 27 j 09:28	26°♄13'28			-1669 Aug 17 j 11:43	0°♄	
min. Earth dist.	-1674 Jul 24 j 06:29	21°♄48'17	0.38864 AU	evening set	-1669 Sep 07 j 14:39	14°♄41'06	
greatest brilliancy	-1674 Jul 28 j 00:56	20°♄44'00	-2.8m	max. Earth dist.	-1669 Sep 22 j 13:02	25°♄19'24	2.46409 AU
opposition	-1674 Jul 29 j 10:53	20°♄19'46	-6°-45'-17		-1669 Sep 29 j 00:25	0°♄	
direct	-1674 Aug 28 j 07:02	15°♄08'52		desc. node	-1669 Oct 26 j 15:25	20°♄22'13	
	-1674 Oct 20 j 16:54	0°♄					
	-1674 Dec 14 j 06:04	0°♄		conjunction	-1669 Oct 30 j 20:55	23°♄32'40	0°-2'-52
asc. node	-1673 Jan 06 j 19:57	14°♄19'24		minimum elong	-1669 Oct 30 j 20:46	23°♄32'23	0°02'54
	-1673 Feb 01 j 03:47	0°♄		behind sun begin	-1669 Oct 29 j 21:13	22°♄48'07	
	-1673 Mar 21 j 05:56	0°♄		behind sun end	-1669 Oct 31 j 20:20	24°♄16'41	
	-1673 May 08 j 06:16	0°♄			-1669 Nov 08 j 10:04	0°♄	
evening set	-1673 Jun 19 j 15:48	26°♄41'00			-1669 Dec 17 j 09:02	0°♄	
	-1673 Jun 24 j 21:17	0°♄		morning rise	-1669 Dec 30 j 00:17	9°♄52'13	
max. Earth dist.	-1673 Jul 21 j 18:17	17°♄11'01	2.65229 AU		-1668 Jan 24 j 16:35	0°♄	
				greatest brilliancy	-1668 Feb 06 j 12:03	10°♄01'28	1.2m
conjunction	-1673 Aug 04 j 18:08	26°♄14'12	1°10'00		-1668 Mar 03 j 05:37	0°♄	
minimum elong	-1673 Aug 04 j 18:21	26°♄14'34	1°10'02		-1668 Apr 11 j 21:39	0°♄	
	-1673 Aug 10 j 12:48	0°♄			-1668 May 23 j 15:43	0°♄	
morning rise	-1673 Sep 19 j 00:50	26°♄09'10			-1668 Jul 07 j 18:26	0°♄	
	-1673 Sep 24 j 17:52	0°♄		asc. node	-1668 Aug 28 j 18:27	0°♄03'26	
	-1673 Nov 07 j 08:45	0°♄			-1668 Aug 28 j 15:46	0°♄	
	-1673 Dec 19 j 12:52	0°♄		retrograde	-1668 Nov 06 j 14:27	21°♄54'33	
desc. node	-1672 Jan 21 j 17:22	24°♄12'14		opposition	-1668 Dec 16 j 16:47	12°♄06'52	3°37'19
	-1672 Jan 29 j 14:11	0°♄		greatest brilliancy	-1668 Dec 16 j 11:17	12°♄12'23	-1.3m
	-1672 Mar 10 j 03:19	0°♄		min. Earth dist.	-1668 Dec 15 j 18:32	12°♄29'11	0.67016 AU
	-1672 Apr 20 j 07:25	0°♄		direct	-1667 Jan 25 j 23:41	2°♄26'14	
	-1672 Jun 03 j 17:12	0°♄			-1667 Apr 19 j 20:50	0°♄	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 24

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1667 Jun 11 j 12:07	0°♈		behind sun begin	-1662 May 03 j 11:02	27°♑19'47	
	-1667 Jul 27 j 22:54	0°♍		behind sun end	-1662 May 05 j 00:56	28°♑23'01	
	-1667 Sep 08 j 17:34	0°♊			-1662 May 07 j 11:08	0°♉	
desc. node	-1667 Sep 12 j 13:31	2°♊47'13		max. Earth dist.	-1662 May 25 j 22:00	12°♉11'21	2.61098 AU
	-1667 Oct 18 j 23:39	0°♋			-1662 Jun 22 j 08:21	0°♊	
evening set	-1667 Oct 31 j 03:19	9°♋19'50		morning rise	-1662 Jun 23 j 12:57	0°♊45'59	
	-1667 Nov 26 j 15:59	0°♌			-1662 Aug 08 j 14:12	0°♎	
					-1662 Sep 26 j 00:46	0°♏	
conjunction	-1666 Jan 03 j 03:06	29°♌31'47	-1°-1'-29		-1662 Nov 15 j 11:03	0°♐	
minimum elong	-1666 Jan 03 j 00:54	29°♌27'27	1°01'30		-1661 Jan 11 j 08:20	0°♑	
	-1666 Jan 03 j 17:25	0°♒		retrograde	-1661 Mar 13 j 16:13	16°♑56'41	
max. Earth dist.	-1666 Feb 01 j 00:43	22°♒11'33	2.37819 AU	opposition	-1661 Apr 16 j 05:39	10°♑27'04	1°06'48
	-1666 Feb 11 j 02:18	0°♓		greatest brilliancy	-1661 Apr 16 j 20:21	10°♑14'57	-2.3m
morning rise	-1666 Mar 13 j 05:48	22°♓59'15		min. Earth dist.	-1661 Apr 24 j 15:44	7°♑40'52	0.46313 AU
	-1666 Mar 22 j 15:01	0°♈		desc. node	-1661 May 05 j 11:08	4°♑38'04	
	-1666 May 03 j 01:01	0°♑		direct	-1661 May 23 j 03:09	2°♑31'03	
	-1666 Jun 15 j 22:37	0°♒			-1661 Aug 04 j 17:42	0°♋	
asc. node	-1666 Jul 16 j 17:53	19°♒53'08			-1661 Sep 18 j 15:09	0°♌	
	-1666 Aug 02 j 01:57	0°♊			-1661 Oct 29 j 20:58	0°♍	
	-1666 Sep 23 j 23:44	0°♋			-1661 Dec 09 j 16:25	0°♎	
retrograde	-1666 Dec 11 j 16:43	25°♋24'04			-1660 Jan 20 j 09:42	0°♏	
opposition	-1665 Jan 19 j 22:43	16°♋11'34	4°42'00		-1660 Mar 03 j 16:20	0°♐	
greatest brilliancy	-1665 Jan 20 j 11:58	15°♋58'30	-1.3m	asc. node	-1660 Mar 07 j 13:36	2°♑38'09	
min. Earth dist.	-1665 Jan 22 j 21:13	15°♋02'06	0.66132 AU		-1660 Apr 17 j 15:18	0°♒	
direct	-1665 Mar 02 j 05:52	6°♋10'39		evening set	-1660 Apr 25 j 23:01	5°♒26'49	
	-1665 May 15 j 22:24	0°♈			-1660 Jun 02 j 22:23	0°♊	
	-1665 Jul 06 j 01:13	0°♍					
desc. node	-1665 Jul 31 j 12:10	16°♍56'09		conjunction	-1660 Jun 13 j 20:50	7°♊00'17	0°50'15
	-1665 Aug 19 j 03:58	0°♊		minimum elong	-1660 Jun 13 j 19:31	6°♊58'11	0°50'16
	-1665 Sep 28 j 19:38	0°♋		max. Earth dist.	-1660 Jun 18 j 21:41	10°♊13'27	2.66600 AU
	-1665 Nov 06 j 14:31	0°♌			-1660 Jul 19 j 22:12	0°♎	
	-1665 Dec 14 j 17:34	0°♍		morning rise	-1660 Jul 29 j 19:09	6°♎17'08	
evening set	-1664 Jan 08 j 07:44	19°♍14'18			-1660 Sep 04 j 23:47	0°♏	
	-1664 Jan 22 j 05:41	0°♎			-1660 Oct 21 j 19:39	0°♐	
	-1664 Mar 01 j 23:24	0°♏			-1660 Dec 07 j 13:59	0°♑	
					-1659 Jan 24 j 02:09	0°♒	
conjunction	-1664 Mar 12 j 12:24	7°♏44'43	0°-46'-6		-1659 Mar 16 j 00:19	0°♓	
minimum elong	-1664 Mar 12 j 14:55	7°♏49'19	0°46'07	desc. node	-1659 Mar 22 j 10:17	3°♓25'17	
	-1664 Apr 12 j 13:36	0°♑		retrograde	-1659 May 28 j 05:35	24°♓57'22	
max. Earth dist.	-1664 Apr 23 j 13:12	7°♑40'27	2.50465 AU	opposition	-1659 Jun 27 j 14:25	19°♓54'33	-5°-58'-16
morning rise	-1664 May 10 j 17:48	19°♑29'21		min. Earth dist.	-1659 Jun 27 j 11:29	19°♓56'29	0.37566 AU
	-1664 May 26 j 07:55	0°♒		greatest brilliancy	-1659 Jun 27 j 12:50	19°♓55'36	-2.9m
asc. node	-1664 Jun 02 j 16:48	4°♒54'25		direct	-1659 Jul 27 j 15:50	14°♓54'09	
	-1664 Jul 11 j 08:15	0°♊			-1659 Sep 18 j 05:12	0°♔	
	-1664 Aug 28 j 19:57	0°♋			-1659 Nov 09 j 09:44	0°♌	
	-1664 Oct 20 j 11:39	0°♈			-1659 Dec 26 j 02:39	0°♍	
	-1663 Jan 03 j 19:26	0°♍		asc. node	-1658 Jan 23 j 12:42	18°♍28'59	
retrograde	-1663 Jan 19 j 14:07	1°♍26'00			-1658 Feb 10 j 07:15	0°♎	
	-1663 Feb 03 j 14:36	30°♎♏			-1658 Mar 29 j 01:36	0°♏	
opposition	-1663 Feb 25 j 20:31	23°♏13'42	4°18'47		-1658 May 15 j 09:18	0°♊	
greatest brilliancy	-1663 Feb 27 j 05:21	22°♏42'45	-1.6m	evening set	-1658 Jun 04 j 22:19	12°♊59'46	
min. Earth dist.	-1663 Mar 04 j 12:52	20°♏43'03	0.58781 AU		-1658 Jul 01 j 17:10	0°♋	
direct	-1663 Apr 07 j 11:28	13°♏31'00		max. Earth dist.	-1658 Jul 12 j 14:32	6°♋56'54	2.66671 AU
	-1663 Jun 03 j 17:22	0°♍					
desc. node	-1663 Jun 17 j 12:14	7°♍12'43		conjunction	-1658 Jul 21 j 06:51	12°♋30'28	1°09'35
	-1663 Jul 24 j 17:45	0°♊		minimum elong	-1658 Jul 21 j 06:28	12°♋29'52	1°09'37
	-1663 Sep 05 j 09:56	0°♋			-1658 Aug 17 j 08:57	0°♌	
	-1663 Oct 15 j 02:35	0°♌		morning rise	-1658 Sep 04 j 03:24	11°♌36'56	
	-1663 Nov 22 j 20:09	0°♍			-1658 Oct 01 j 20:49	0°♎	
	-1663 Dec 31 j 21:42	0°♎			-1658 Nov 15 j 00:57	0°♏	
	-1662 Feb 10 j 05:11	0°♏			-1658 Dec 28 j 00:11	0°♐	
evening set	-1662 Mar 10 j 10:23	20°♏14'52		desc. node	-1657 Feb 07 j 10:11	29°♎31'07	
	-1662 Mar 24 j 08:19	0°♑			-1657 Feb 08 j 02:17	0°♒	
asc. node	-1662 Apr 20 j 14:32	18°♑41'26			-1657 Mar 22 j 00:11	0°♓	
					-1657 May 04 j 12:44	0°♔	
conjunction	-1662 May 04 j 06:23	27°♑52'05	0°08'03		-1657 Jun 26 j 04:42	0°♕	
minimum elong	-1662 May 04 j 05:59	27°♑51'25	0°08'04	retrograde	-1657 Aug 04 j 10:27	9°♕36'04	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 25

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

min. Earth dist.	-1657 Sep 01 j 07:51	4° H 18'25	0.45349 AU		-1652 Sep 16 j 02:34	0° H	
greatest brilliancy	-1657 Sep 07 j 16:54	2° H 06'59	-2.4m	desc. node	-1652 Sep 29 j 07:08	9° H 39'47	
opposition	-1657 Sep 09 j 08:46	1° H 32'28	-4°-33'-25	evening set	-1652 Oct 07 j 21:26	16° H 02'57	
	-1657 Sep 13 j 22:35	30° R ≈			-1652 Oct 26 j 09:04	0° M	
direct	-1657 Oct 11 j 18:27	25° \approx 00'07		max. Earth dist.	-1652 Nov 05 j 11:27	7° M 43'56	2.38995 AU
	-1657 Nov 10 j 05:18	0° H			-1652 Dec 04 j 03:07	0° J	
asc. node	-1657 Dec 11 j 11:28	12° H 34'27					
	-1656 Jan 14 j 04:16	0° Y		conjunction	-1652 Dec 06 j 13:37	1° J 54'40	0°-43'-18
	-1656 Mar 06 j 05:21	0° B		minimum elong	-1652 Dec 06 j 10:49	1° J 49'11	0°43'20
	-1656 Apr 24 j 21:57	0° II			-1651 Jan 11 j 05:56	0° B	
	-1656 Jun 12 j 06:37	0° S		morning rise	-1651 Feb 12 j 12:47	25° B 16'22	
evening set	-1656 Jul 11 j 18:51	18° S 46'23			-1651 Feb 18 j 15:17	0° \approx	
	-1656 Jul 29 j 02:39	0° Ω			-1651 Mar 30 j 03:53	0° H	
max. Earth dist.	-1656 Aug 05 j 08:50	4° Ω 45'16	2.61402 AU		-1651 May 10 j 14:35	0° Y	
					-1651 Jun 23 j 18:12	0° B	
conjunction	-1656 Aug 27 j 08:54	19° Ω 21'46	1°01'35	asc. node	-1651 Aug 02 j 08:55	24° B 55'39	
minimum elong	-1656 Aug 27 j 10:00	19° Ω 23'38	1°01'36		-1651 Aug 10 j 21:50	0° II	
	-1656 Sep 12 j 02:26	0° M			-1651 Oct 07 j 20:13	0° S	
morning rise	-1656 Oct 13 j 12:57	21° M 46'07		retrograde	-1651 Nov 27 j 19:11	12° S 32'40	
	-1656 Oct 25 j 04:08	0° H		opposition	-1650 Jan 06 j 12:24	3° S 03'50	4°25'42
	-1656 Dec 05 j 12:45	0° M		greatest brilliancy	-1650 Jan 06 j 17:21	2° S 58'55	-1.2m
desc. node	-1656 Dec 25 j 09:02	14° M 45'43		min. Earth dist.	-1650 Jan 07 j 22:30	2° S 29'56	0.67272 AU
	-1655 Jan 14 j 14:32	0° J			-1650 Jan 14 j 08:25	30° R II	
	-1655 Feb 23 j 00:21	0° B		direct	-1650 Feb 16 j 14:22	23° II 07'29	
	-1655 Apr 03 j 15:39	0° \approx			-1650 Mar 25 j 03:21	0° S	
	-1655 May 14 j 20:45	0° H			-1650 May 27 j 07:04	0° Ω	
	-1655 Jun 29 j 09:59	0° Y			-1650 Jul 14 j 19:06	0° M	
	-1655 Sep 08 j 20:41	0° B		desc. node	-1650 Aug 17 j 05:43	22° M 53'00	
retrograde	-1655 Sep 18 j 07:43	0° B 36'45			-1650 Aug 27 j 05:03	0° H	
	-1655 Sep 27 j 13:44	30° R Y			-1650 Oct 06 j 15:15	0° M	
min. Earth dist.	-1655 Oct 21 j 12:52	23° Y 13'17	0.57700 AU		-1650 Nov 14 j 08:00	0° J	
opposition	-1655 Oct 27 j 14:46	20° Y 50'09	0°-2'-8	evening set	-1650 Dec 11 j 13:18	21° J 27'20	
greatest brilliancy	-1665 Apr 10 j 02:49	13° S 58'26	42.7m		-1650 Dec 22 j 09:13	0° B	
asc. node	-1655 Oct 28 j 10:24	20° Y 30'57			-1649 Jan 29 j 18:43	0° \approx	
direct	-1655 Dec 03 j 06:25	12° Y 26'52					
	-1654 Feb 04 j 00:31	0° B		conjunction	-1649 Feb 16 j 02:19	13° \approx 15'58	-1°-1'-35
	-1654 Apr 02 j 18:40	0° II		minimum elong	-1649 Feb 16 j 04:24	13° \approx 19'54	1°01'37
	-1654 May 23 j 18:23	0° S			-1649 Mar 10 j 09:03	0° H	
	-1654 Jul 10 j 12:10	0° Ω		max. Earth dist.	-1649 Apr 06 j 09:57	19° H 44'27	2.45214 AU
evening set	-1654 Aug 21 j 01:19	27° Ω 36'45			-1649 Apr 20 j 19:52	0° Y	
	-1654 Aug 24 j 13:07	0° M		morning rise	-1649 Apr 21 j 01:50	0° Y 10'31	
max. Earth dist.	-1654 Sep 05 j 19:03	8° M 27'42	2.51303 AU		-1649 Jun 03 j 13:07	0° B	
	-1654 Oct 06 j 03:30	0° H		asc. node	-1649 Jun 20 j 07:24	11° B 04'33	
					-1649 Jul 19 j 19:08	0° II	
conjunction	-1654 Oct 10 j 10:17	3° H 06'12	0°21'20		-1649 Sep 07 j 07:32	0° S	
minimum elong	-1654 Oct 10 j 11:20	3° H 08'07	0°21'18		-1649 Nov 03 j 05:47	0° Ω	
desc. node	-1654 Nov 12 j 07:43	27° H 25'55		retrograde	-1648 Jan 04 j 03:02	16° Ω 59'11	
	-1654 Nov 15 j 17:34	0° M		opposition	-1648 Feb 11 j 07:58	8° Ω 19'41	4°40'54
morning rise	-1654 Dec 04 j 10:31	14° M 13'22		greatest brilliancy	-1648 Feb 12 j 10:20	7° Ω 54'15	-1.4m
	-1654 Dec 24 j 21:53	0° J		min. Earth dist.	-1648 Feb 16 j 14:36	6° Ω 17'50	0.62401 AU
	-1653 Feb 01 j 10:19	0° B			-1648 Mar 07 j 19:53	30° R S	
	-1653 Mar 12 j 03:21	0° \approx		direct	-1648 Mar 23 j 11:29	28° S 23'24	
	-1653 Apr 20 j 23:45	0° H			-1648 Apr 08 j 20:40	0° Ω	
	-1653 Jun 02 j 02:43	0° Y			-1648 Jun 18 j 02:16	0° M	
	-1653 Jul 18 j 10:11	0° B		desc. node	-1648 Jul 04 j 04:09	9° M 44'39	
	-1653 Sep 14 j 21:50	0° II			-1648 Aug 03 j 20:09	0° H	
asc. node	-1653 Sep 15 j 10:18	0° II 11'58			-1648 Sep 14 j 09:12	0° M	
retrograde	-1653 Oct 25 j 03:45	8° II 44'42			-1648 Oct 23 j 14:02	0° J	
	-1653 Dec 01 j 08:56	30° R B			-1648 Nov 30 j 23:43	0° B	
min. Earth dist.	-1653 Dec 01 j 20:57	29° B 47'58	0.65602 AU		-1647 Jan 08 j 18:04	0° \approx	
opposition	-1653 Dec 04 j 07:08	28° B 49'34	2°52'27	evening set	-1647 Feb 16 j 04:50	28° \approx 51'03	
greatest brilliancy	-1653 Dec 03 j 21:37	28° B 59'07	-1.3m		-1647 Feb 17 j 18:22	0° H	
direct	-1652 Jan 12 j 19:56	19° B 24'13			-1647 Mar 31 j 14:35	0° Y	
	-1652 Feb 28 j 21:00	0° II					
	-1652 Apr 30 j 07:05	0° S		conjunction	-1647 Apr 15 j 12:42	10° Y 21'13	0°-12'-58
	-1652 Jun 19 j 16:02	0° Ω		minimum elong	-1647 Apr 15 j 13:25	10° Y 22'27	0°12'58
	-1652 Aug 04 j 11:36	0° M		behind sun begin	-1647 Apr 14 j 23:59	9° Y 59'21	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 26

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

behind sun end	-1647 Apr 16 j 02:50	10° Υ 45'33		greatest brilliancy	-1642 Aug 13 j 02:32	7° \approx 09'50	-2.6m
asc. node	-1647 May 07 j 06:55	25° Υ 09'31		opposition	-1642 Aug 14 j 20:53	6° \approx 37'16	-6°-15'-25
	-1647 May 14 j 12:16	0° \mathcal{B}		direct	-1642 Sep 14 j 13:02	1° \approx 00'24	
max. Earth dist.	-1647 May 14 j 19:20	0° \mathcal{B} 11'48	2.57474 AU		-1642 Dec 05 j 03:23	0° \mathcal{H}	
morning rise	-1647 Jun 07 j 16:31	15° \mathcal{B} 58'16		asc. node	-1642 Dec 28 j 02:58	13° \mathcal{H} 00'09	
	-1647 Jun 29 j 08:18	0° Π			-1641 Jan 25 j 18:11	0° Υ	
	-1647 Aug 15 j 21:23	0° \mathcal{E}			-1641 Mar 15 j 21:23	0° \mathcal{B}	
	-1647 Oct 04 j 09:11	0° \mathcal{Q}			-1641 May 03 j 09:27	0° Π	
	-1647 Nov 27 j 01:58	0° \mathcal{M}			-1641 Jun 20 j 06:03	0° \mathcal{E}	
retrograde	-1646 Feb 18 j 14:39	27° \mathcal{M} 36'01		evening set	-1641 Jun 28 j 00:43	4° \mathcal{E} 56'07	
opposition	-1646 Mar 25 j 21:35	20° \mathcal{M} 20'01	2°51'25	max. Earth dist.	-1641 Jul 27 j 08:00	23° \mathcal{E} 44'14	2.64091 AU
greatest brilliancy	-1646 Mar 27 j 05:16	19° \mathcal{M} 51'59	-2.0m		-1641 Aug 05 j 23:12	0° \mathcal{Q}	
min. Earth dist.	-1646 Apr 03 j 05:50	17° \mathcal{M} 23'39	0.51529 AU				
direct	-1646 May 03 j 18:49	11° \mathcal{M} 26'30		conjunction	-1641 Aug 13 j 04:00	4° \mathcal{Q} 42'45	1°08'15
desc. node	-1646 May 22 j 03:24	13° \mathcal{M} 37'08		minimum elong	-1641 Aug 13 j 04:34	4° \mathcal{Q} 43'41	1°08'17
	-1646 Jul 02 j 01:30	0° \mathcal{A}			-1641 Sep 20 j 02:22	0° \mathcal{M}	
	-1646 Aug 19 j 06:24	0° \mathcal{M}		morning rise	-1641 Sep 27 j 22:31	5° \mathcal{M} 19'47	
	-1646 Sep 29 j 20:23	0° \mathcal{A}			-1641 Nov 02 j 12:24	0° \mathcal{A}	
	-1646 Nov 08 j 15:24	0° \mathcal{E}			-1641 Dec 14 j 08:44	0° \mathcal{M}	
	-1646 Dec 18 j 12:08	0° \approx		desc. node	-1640 Jan 12 j 02:13	21° \mathcal{M} 07'58	
	-1645 Jan 28 j 12:04	0° \mathcal{H}			-1640 Jan 24 j 00:19	0° \mathcal{A}	
	-1645 Mar 12 j 04:59	0° Υ			-1640 Mar 04 j 01:16	0° \mathcal{E}	
asc. node	-1645 Mar 25 j 05:41	8° Υ 53'55			-1640 Apr 13 j 11:31	0° \approx	
evening set	-1645 Apr 09 j 17:03	19° Υ 19'55			-1640 May 26 j 04:22	0° \mathcal{H}	
	-1645 Apr 25 j 18:00	0° \mathcal{B}			-1640 Jul 16 j 06:02	0° Υ	
				retrograde	-1640 Sep 02 j 02:06	13° Υ 10'30	
conjunction	-1645 May 30 j 11:34	22° \mathcal{B} 41'40	0°36'18	min. Earth dist.	-1640 Oct 03 j 05:45	6° Υ 33'17	0.53184 AU
minimum elong	-1645 May 30 j 10:19	22° \mathcal{B} 39'39	0°36'19	opposition	-1640 Oct 10 j 12:13	3° Υ 47'16	-1°-36'-59
	-1645 Jun 10 j 19:25	0° Π		greatest brilliancy	-1640 Oct 09 j 21:30	4° Υ 01'16	-1.9m
max. Earth dist.	-1645 Jun 10 j 14:10	29° \mathcal{B} 51'33	2.65080 AU		-1640 Oct 21 j 04:49	30° \mathcal{R} \mathcal{H}	
morning rise	-1645 Jul 16 j 16:41	22° Π 56'12		direct	-1640 Nov 14 j 15:18	26° \mathcal{H} 00'21	
	-1645 Jul 27 j 19:33	0° \mathcal{E}		asc. node	-1640 Nov 14 j 01:58	26° \mathcal{H} 00'28	
	-1645 Sep 13 j 06:07	0° \mathcal{Q}			-1640 Dec 11 j 04:36	0° Υ	
	-1645 Oct 31 j 01:02	0° \mathcal{M}			-1639 Feb 17 j 12:05	0° \mathcal{B}	
	-1645 Dec 18 j 21:45	0° \mathcal{A}			-1639 Apr 11 j 14:35	0° Π	
	-1644 Feb 09 j 15:35	0° \mathcal{M}			-1639 May 31 j 06:33	0° \mathcal{E}	
desc. node	-1644 Apr 08 j 02:49	23° \mathcal{M} 19'41			-1639 Jul 17 j 13:41	0° \mathcal{Q}	
retrograde	-1644 Apr 25 j 23:15	25° \mathcal{M} 13'07		evening set	-1639 Aug 04 j 17:58	11° \mathcal{Q} 56'23	
opposition	-1644 May 26 j 20:44	19° \mathcal{M} 58'30	-3°-14'-13	max. Earth dist.	-1639 Aug 23 j 05:33	24° \mathcal{Q} 20'02	2.55798 AU
greatest brilliancy	-1644 May 27 j 14:39	19° \mathcal{M} 45'55	-2.7m		-1639 Aug 31 j 13:14	0° \mathcal{M}	
min. Earth dist.	-1644 May 31 j 20:12	18° \mathcal{M} 35'01	0.39355 AU				
direct	-1644 Jun 28 j 02:44	14° \mathcal{M} 06'35		conjunction	-1639 Sep 22 j 01:49	14° \mathcal{M} 55'05	0°41'02
	-1644 Aug 20 j 05:48	0° \mathcal{A}		minimum elong	-1639 Sep 22 j 03:18	14° \mathcal{M} 57'41	0°41'02
	-1644 Oct 08 j 23:41	0° \mathcal{E}			-1639 Oct 13 j 07:21	0° \mathcal{A}	
	-1644 Nov 22 j 06:17	0° \approx		morning rise	-1639 Nov 12 j 02:52	21° \mathcal{A} 46'39	
	-1643 Jan 05 j 01:18	0° \mathcal{H}			-1639 Nov 23 j 03:36	0° \mathcal{M}	
asc. node	-1643 Feb 09 j 03:50	23° \mathcal{H} 39'13		desc. node	-1639 Nov 29 j 01:33	4° \mathcal{M} 26'27	
	-1643 Feb 18 j 16:53	0° Υ			-1638 Jan 01 j 14:50	0° \mathcal{A}	
	-1643 Apr 05 j 13:43	0° \mathcal{B}			-1638 Feb 09 j 09:36	0° \mathcal{E}	
evening set	-1643 May 20 j 21:46	29° \mathcal{B} 03'21			-1638 Mar 20 j 08:15	0° \approx	
	-1643 May 22 j 09:21	0° Π			-1638 Apr 29 j 11:44	0° \mathcal{H}	
max. Earth dist.	-1643 Jul 03 j 10:12	26° Π 45'04	2.67289 AU		-1638 Jun 11 j 06:38	0° Υ	
					-1638 Jul 29 j 22:56	0° \mathcal{B}	
conjunction	-1643 Jul 06 j 21:53	28° Π 58'26	1°05'05	asc. node	-1638 Oct 02 j 00:35	24° \mathcal{B} 23'57	
minimum elong	-1643 Jul 06 j 21:01	28° Π 57'03	1°05'06	retrograde	-1638 Oct 11 j 10:09	24° \mathcal{B} 58'36	
	-1643 Jul 08 j 12:30	0° \mathcal{E}		min. Earth dist.	-1638 Nov 16 j 12:23	16° \mathcal{B} 34'27	0.63217 AU
morning rise	-1643 Aug 20 j 19:52	27° \mathcal{E} 46'41		opposition	-1638 Nov 20 j 10:00	15° \mathcal{B} 00'48	1°55'48
	-1643 Aug 24 j 06:21	0° \mathcal{Q}		greatest brilliancy	-1638 Nov 19 j 23:50	15° \mathcal{B} 10'58	-1.5m
	-1643 Oct 09 j 03:35	0° \mathcal{M}		direct	-1638 Dec 28 j 23:43	5° \mathcal{B} 55'12	
	-1643 Nov 23 j 01:38	0° \mathcal{A}			-1637 Mar 16 j 03:57	0° Π	
	-1642 Jan 06 j 04:31	0° \mathcal{M}			-1637 May 10 j 07:24	0° \mathcal{E}	
	-1642 Feb 18 j 23:25	0° \mathcal{A}			-1637 Jun 28 j 08:07	0° \mathcal{Q}	
desc. node	-1642 Feb 24 j 02:00	3° \mathcal{A} 29'16			-1637 Aug 12 j 18:14	0° \mathcal{M}	
	-1642 Apr 04 j 16:33	0° \mathcal{E}		evening set	-1637 Sep 18 j 07:56	25° \mathcal{M} 39'24	
	-1642 May 25 j 20:32	0° \approx			-1637 Sep 24 j 08:12	0° \mathcal{A}	
retrograde	-1642 Jul 12 j 10:17	13° \approx 17'58		max. Earth dist.	-1637 Oct 04 j 14:07	7° \mathcal{A} 28'54	2.43633 AU
min. Earth dist.	-1642 Aug 08 j 00:03	8° \approx 43'03	0.40772 AU	desc. node	-1637 Oct 16 j 23:44	16° \mathcal{A} 39'34	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 27

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1637 Nov 03 j 17:03	0°♄					-1632 Dec 13 j 13:54	0°♄	
				retrograde			-1631 Jan 29 j 19:15	10°♄44'38	
conjunction	-1637 Nov 12 j 14:41	6°♄47'13	0°-17'-51	opposition			-1631 Mar 07 j 11:06	2°♄50'22	3°55'11
minimum elong	-1637 Nov 12 j 13:29	6°♄44'56	0°17'52	greatest brilliancy			-1631 Mar 08 j 21:39	2°♄18'24	-1.7m
	-1637 Dec 12 j 14:31	0°♂		min. Earth dist.			-1631 Mar 14 j 20:31	0°♄06'47	0.56388 AU
morning rise	-1636 Jan 14 j 20:29	26°♂04'42					-1631 Mar 15 j 04:01	30°♄0	
	-1636 Jan 19 j 20:18	0°♂		direct			-1631 Apr 16 j 15:05	23°♄20'40	
	-1636 Feb 27 j 07:27	0°≈					-1631 May 20 j 13:12	0°♄	
	-1636 Apr 06 j 21:14	0°♂		desc. node			-1631 Jun 07 j 19:51	7°♄42'13	
	-1636 May 18 j 10:43	0°♄					-1631 Jul 17 j 10:00	0°♄	
	-1636 Jul 02 j 01:11	0°♂					-1631 Aug 30 j 07:48	0°♄	
asc. node	-1636 Aug 19 j 00:41	28°♂55'02					-1631 Oct 09 j 12:34	0°♂	
	-1636 Aug 20 j 23:49	0°♄					-1631 Nov 17 j 13:12	0°♂	
retrograde	-1636 Nov 14 j 07:08	29°♄46'33					-1631 Dec 26 j 19:50	0°≈	
opposition	-1636 Dec 24 j 07:29	20°♄04'40	3°58'23				-1630 Feb 05 j 07:34	0°♂	
greatest brilliancy	-1636 Dec 24 j 05:14	20°♄06'56	-1.2m				-1630 Mar 19 j 14:04	0°♄	
min. Earth dist.	-1636 Dec 24 j 05:17	20°♄06'53	0.67383 AU	evening set			-1630 Mar 21 j 22:24	1°♄37'35	
direct	-1635 Feb 02 j 22:49	10°♄17'12		asc. node			-1630 Apr 10 j 21:33	15°♄17'54	
	-1635 Apr 11 j 19:27	0°♂					-1630 May 02 j 19:11	0°♂	
	-1635 Jun 05 j 19:24	0°♄							
	-1635 Jul 22 j 21:12	0°♄		conjunction			-1630 May 14 j 03:14	7°♂30'06	0°19'10
desc. node	-1635 Sep 02 j 22:09	29°♄18'21		minimum elong			-1630 May 14 j 02:25	7°♂28'44	0°19'11
	-1635 Sep 03 j 21:11	0°♄		max. Earth dist.			-1630 May 31 j 22:35	19°♂09'18	2.62738 AU
	-1635 Oct 14 j 04:42	0°♄					-1630 Jun 17 j 16:46	0°♄	
evening set	-1635 Nov 14 j 11:23	24°♄11'42		morning rise			-1630 Jul 02 j 03:36	9°♄16'07	
	-1635 Nov 21 j 21:09	0°♂					-1630 Aug 03 j 19:34	0°♂	
	-1635 Dec 29 j 22:13	0°♂					-1630 Sep 20 j 19:29	0°♄	
							-1630 Nov 09 j 00:56	0°♄	
conjunction	-1634 Jan 19 j 05:27	15°♂57'12	-1°-5'-47				-1630 Dec 31 j 16:51	0°♄	
minimum elong	-1634 Jan 19 j 04:50	15°♂55'58	1°05'50	retrograde			-1629 Mar 28 j 11:43	29°♄51'57	
	-1634 Feb 06 j 06:45	0°≈		desc. node			-1629 Apr 25 j 19:11	25°♄08'36	
max. Earth dist.	-1634 Mar 07 j 09:19	22°≈12'40	2.40035 AU	opposition			-1629 Apr 30 j 00:40	23°♄50'40	0°-15'-46
	-1634 Mar 17 j 19:19	0°♂		greatest brilliancy			-1629 Apr 27 j 04:54	24°♄43'09	-2.5m
morning rise	-1634 Mar 28 j 05:22	7°♂41'57		min. Earth dist.			-1629 May 07 j 19:18	21°♄24'45	0.43483 AU
	-1634 Apr 28 j 04:30	0°♄		direct			-1629 Jun 04 j 09:25	16°♄36'38	
	-1634 Jun 10 j 22:51	0°♂					-1629 Jul 22 j 07:05	0°♄	
asc. node	-1634 Jul 07 j 00:17	17°♂00'42					-1629 Sep 10 j 07:38	0°♂	
	-1634 Jul 27 j 15:13	0°♄					-1629 Oct 23 j 02:33	0°♂	
	-1634 Sep 16 j 20:28	0°♂					-1629 Dec 03 j 17:45	0°≈	
	-1634 Nov 25 j 02:31	0°♄					-1628 Jan 15 j 00:11	0°♂	
retrograde	-1634 Dec 19 j 22:53	3°♄24'09		asc. node			-1628 Feb 26 j 20:18	29°♂26'48	
	-1633 Jan 12 j 00:06	30°♄0					-1628 Feb 27 j 15:57	0°♄	
opposition	-1633 Jan 27 j 21:31	24°♄22'15	4°45'33				-1628 Apr 12 j 21:05	0°♂	
greatest brilliancy	-1633 Jan 28 j 15:34	24°♄04'35	-1.3m	evening set			-1628 May 05 j 06:33	14°♂32'39	
min. Earth dist.	-1633 Jan 31 j 16:19	22°♄53'28	0.65084 AU				-1628 May 29 j 07:33	0°♄	
direct	-1633 Mar 10 j 05:41	14°♄21'05							
	-1633 May 06 j 18:46	0°♄		conjunction			-1628 Jun 22 j 08:38	15°♄21'35	0°56'44
	-1633 Jun 29 j 22:40	0°♄		minimum elong			-1628 Jun 22 j 07:25	15°♄19'39	0°56'46
desc. node	-1633 Jul 21 j 21:16	14°♄13'28		max. Earth dist.			-1628 Jun 24 j 06:01	16°♄33'56	2.67082 AU
	-1633 Aug 13 j 19:26	0°♄					-1628 Jul 15 j 07:58	0°♂	
	-1633 Sep 23 j 17:41	0°♄		morning rise			-1628 Aug 06 j 19:03	14°♄19'53	
	-1633 Nov 01 j 15:37	0°♂					-1628 Aug 31 j 06:12	0°♄	
	-1633 Dec 09 j 20:20	0°♂					-1628 Oct 16 j 16:53	0°♄	
	-1632 Jan 17 j 09:38	0°≈					-1628 Dec 01 j 16:32	0°♄	
evening set	-1632 Jan 23 j 09:06	4°≈34'50					-1627 Jan 16 j 15:07	0°♄	
	-1632 Feb 26 j 04:37	0°♂		desc. node			-1627 Mar 04 j 17:08	0°♂	
							-1627 Mar 12 j 19:51	4°♂58'11	
conjunction	-1632 Mar 25 j 13:57	20°♂36'59	0°-34'-33				-1627 Apr 27 j 07:22	0°♂	
minimum elong	-1632 Mar 25 j 15:57	20°♂40'34	0°34'33	retrograde			-1627 Jun 14 j 16:40	13°♄03'08	
	-1632 Apr 07 j 19:48	0°♄		min. Earth dist.			-1627 Jul 12 j 15:01	8°♄31'35	0.37894 AU
max. Earth dist.	-1632 May 01 j 23:34	16°♄44'33	2.53148 AU	opposition			-1627 Jul 15 j 19:08	7°♄39'44	-6°-42'-45
morning rise	-1632 May 21 j 10:09	29°♄53'22		greatest brilliancy			-1627 Jul 14 j 22:09	7°♄54'02	-2.8m
	-1632 May 21 j 14:07	0°♂		direct			-1627 Aug 14 j 09:55	2°♄41'02	
asc. node	-1632 May 23 j 22:22	1°♂33'57					-1627 Oct 30 j 01:39	0°≈	
	-1632 Jul 06 j 11:25	0°♄					-1627 Dec 19 j 00:26	0°♂	
	-1632 Aug 23 j 12:21	0°♂		asc. node			-1626 Jan 13 j 17:54	16°♂12'02	
	-1632 Oct 13 j 15:41	0°♄					-1626 Feb 04 j 12:30	0°♄	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 28

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1626 Mar 23 j 22:48	0°♄	morning rise	-1622 Dec 18 j 09:57	28°♌41'12	
	-1626 May 10 j 14:59	0°♅		-1622 Dec 20 j 02:32	0°♈	
evening set	-1626 Jun 13 j 09:40	21°♅17'58		-1621 Jan 27 j 12:12	0°♈	
	-1626 Jun 27 j 02:54	0°♄		-1621 Mar 07 j 02:16	0°♊	
max. Earth dist.	-1626 Jul 17 j 23:30	13°♄19'11	2.65983 AU	-1621 Apr 15 j 18:57	0°♋	
				-1621 May 27 j 14:44	0°♌	
conjunction	-1626 Jul 29 j 13:10	20°♄46'01	1°10'20	-1621 Jul 12 j 01:13	0°♌	
minimum elong	-1626 Jul 29 j 13:08	20°♄45'58	1°10'21	-1621 Sep 03 j 16:05	0°♍	
	-1626 Aug 12 j 18:58	0°♎	asc. node	-1621 Sep 05 j 16:22	0°♍56'54	
morning rise	-1626 Sep 12 j 13:42	20°♎15'03	retrograde	-1621 Nov 01 j 21:59	16°♍49'03	
	-1626 Sep 27 j 03:35	0°♏	min. Earth dist.	-1621 Dec 10 j 11:23	7°♍35'48	0.66509 AU
	-1626 Nov 10 j 00:55	0°♐	opposition	-1621 Dec 12 j 01:27	6°♍57'38	3°20'03
	-1626 Dec 22 j 13:31	0°♑	greatest brilliancy	-1621 Dec 11 j 17:50	7°♍05'16	-1.3m
desc. node	-1625 Jan 28 j 18:57	26°♑53'40		-1621 Dec 31 j 21:52	30°♒♄	
	-1625 Feb 02 j 01:15	0°♈	direct	-1620 Jan 21 j 00:55	27°♈23'11	
	-1625 Mar 15 j 02:41	0°♉		-1620 Feb 11 j 16:58	0°♉	
	-1625 Apr 26 j 01:03	0°♊		-1620 Apr 23 j 16:46	0°♊	
	-1625 Jun 11 j 10:59	0°♋		-1620 Jun 14 j 08:15	0°♌	
retrograde	-1625 Aug 15 j 21:04	22°♋58'14		-1620 Jul 30 j 13:42	0°♍	
min. Earth dist.	-1625 Sep 13 j 21:03	17°♋12'33	0.48127 AU	-1620 Sep 11 j 08:14	0°♎	
opposition	-1625 Sep 21 j 21:24	14°♋19'20	-3°-27'-27	desc. node	-1620 Sep 19 j 15:00	6°♎02'21
greatest brilliancy	-1625 Sep 20 j 13:25	14°♋48'13	-2.2m	evening set	-1620 Oct 20 j 16:21	29°♎15'56
direct	-1625 Oct 25 j 06:19	7°♋18'22		-1620 Oct 21 j 15:29	0°♏	
asc. node	-1625 Dec 01 j 17:15	14°♋53'54		-1620 Nov 29 j 09:09	0°♈	
	-1624 Jan 05 j 03:23	0°♌	max. Earth dist.	-1620 Dec 13 j 03:08	10°♈48'30	2.37457 AU
	-1624 Feb 29 j 02:15	0°♍				
	-1624 Apr 19 j 17:47	0°♎	conjunction	-1620 Dec 21 j 20:08	17°♈40'28	0°-55'00
	-1624 Jun 07 j 12:23	0°♏	minimum elong	-1620 Dec 21 j 17:17	17°♈34'51	0°55'01
evening set	-1624 Jul 20 j 08:56	27°♏18'27		-1619 Jan 06 j 11:16	0°♉	
	-1624 Jul 24 j 12:17	0°♎		-1619 Feb 13 j 19:44	0°♊	
max. Earth dist.	-1624 Aug 11 j 13:00	11°♎51'26	2.59600 AU	morning rise	-1619 Feb 28 j 23:46	11°♊39'36
				-1619 Mar 25 j 07:17	0°♋	
conjunction	-1624 Sep 05 j 09:38	28°♎33'55	0°55'31	-1619 May 05 j 16:02	0°♌	
minimum elong	-1624 Sep 05 j 10:58	28°♎36'12	0°55'31	-1619 Jun 18 j 13:58	0°♍	
	-1624 Sep 07 j 12:08	0°♏	asc. node	-1619 Jul 23 j 15:14	22°♍26'45	
	-1624 Oct 20 j 11:16	0°♐		-1619 Aug 04 j 23:57	0°♎	
morning rise	-1624 Oct 23 j 16:08	2°♐17'29		-1619 Sep 28 j 08:13	0°♏	
	-1624 Nov 30 j 15:18	0°♑	retrograde	-1619 Dec 05 j 16:53	20°♏21'35	
desc. node	-1624 Dec 15 j 17:43	11°♑16'32	opposition	-1618 Jan 14 j 04:49	11°♏01'24	4°36'29
	-1623 Jan 09 j 11:29	0°♈	greatest brilliancy	-1618 Jan 14 j 14:20	10°♏52'00	-1.3m
	-1623 Feb 17 j 15:15	0°♉	min. Earth dist.	-1618 Jan 16 j 11:25	10°♏07'26	0.66765 AU
	-1623 Mar 28 j 23:05	0°♊	direct	-1618 Feb 24 j 10:44	1°♏01'50	
	-1623 May 08 j 15:44	0°♋		-1618 May 20 j 06:52	0°♌	
	-1623 Jun 21 j 18:16	0°♌		-1618 Jul 09 j 05:25	0°♍	
	-1623 Aug 15 j 15:34	0°♍	desc. node	-1618 Aug 07 j 13:23	19°♍45'02	
retrograde	-1623 Sep 27 j 00:11	10°♍07'46		-1618 Aug 22 j 02:03	0°♎	
asc. node	-1623 Oct 18 j 17:22	6°♍48'49		-1618 Oct 01 j 16:10	0°♏	
min. Earth dist.	-1623 Oct 31 j 07:04	2°♍21'16	0.59890 AU	-1618 Nov 09 j 10:34	0°♈	
opposition	-1623 Nov 05 j 14:54	0°♍14'41	0°45'22	greatest brilliancy	-1618 Dec 04 j 06:58	19°♈33'49 1.2m
greatest brilliancy	-1623 Nov 05 j 09:10	0°♍20'22	-1.6m		-1618 Dec 17 j 12:48	0°♉
	-1623 Nov 06 j 05:45	30°♒♅		evening set	-1618 Dec 27 j 07:22	7°♉41'06
direct	-1623 Dec 13 j 00:26	21°♅34'35		-1617 Jan 24 j 23:07	0°♊	
	-1622 Jan 22 j 20:00	0°♋				
	-1622 Mar 27 j 09:29	0°♌	conjunction	-1617 Mar 02 j 20:02	27°♊57'01	0°-53'-43
	-1622 May 18 j 13:13	0°♍	minimum elong	-1617 Mar 02 j 22:39	28°♊01'53	0°53'44
	-1622 Jul 05 j 17:08	0°♎		-1617 Mar 05 j 14:18	0°♋	
	-1622 Aug 19 j 21:36	0°♏		-1617 Apr 16 j 01:41	0°♌	
evening set	-1622 Aug 30 j 20:38	7°♏33'19	max. Earth dist.	-1617 Apr 17 j 08:16	0°♌53'54	2.48168 AU
max. Earth dist.	-1622 Sep 14 j 17:17	17°♏58'45	2.48648 AU	morning rise	-1617 May 03 j 03:31	11°♌55'07
	-1622 Oct 01 j 12:21	0°♐		-1617 May 29 j 17:54	0°♍	
			asc. node	-1617 Jun 10 j 14:34	7°♍52'51	
conjunction	-1622 Oct 21 j 16:49	14°♐46'50	0°08'00	-1617 Jul 14 j 18:53	0°♎	
minimum elong	-1622 Oct 21 j 17:17	14°♐47'40	0°07'59	-1617 Sep 01 j 14:19	0°♏	
behind sun begin	-1622 Oct 20 j 20:54	14°♐09'59		-1617 Oct 25 j 13:50	0°♌	
behind sun end	-1622 Oct 22 j 13:39	15°♐25'24		retrograde	-1616 Jan 13 j 07:10	25°♌33'24
desc. node	-1622 Nov 02 j 16:42	23°♐43'14		opposition	-1616 Feb 20 j 00:53	17°♌08'15 4°30'11
	-1622 Nov 11 j 00:46	0°♑	greatest brilliancy	-1616 Feb 21 j 07:12	16°♌39'22	-1.5m

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 29

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

min. Earth dist.	-1616 Feb 26 j 03:06	14° Ω 49'19	0.60516 AU		-1611 May 17 j 16:36	0° Π	
direct	-1616 Mar 31 j 23:18	7° Ω 18'00		evening set	-1611 May 29 j 14:22	7° Π 33'14	
	-1616 Jun 09 j 19:50	0° \mathbb{M}			-1611 Jul 03 j 22:17	0° \mathfrak{S}	
desc. node	-1616 Jun 24 j 13:22	8° \mathbb{M} 19'24		max. Earth dist.	-1611 Jul 08 j 19:15	3° \mathfrak{S} 06'27	2.67054 AU
	-1616 Jul 28 j 16:16	0° $\underline{\mathfrak{A}}$					
	-1616 Sep 08 j 20:11	0° \mathbb{M}		conjunction	-1611 Jul 15 j 04:14	7° \mathfrak{S} 10'47	1°08'11
	-1616 Oct 18 j 07:27	0° \mathfrak{A}		minimum elong	-1611 Jul 15 j 03:39	7° \mathfrak{S} 09'51	1°08'12
	-1616 Nov 25 j 21:06	0° \mathfrak{Z}			-1611 Aug 19 j 15:13	0° Ω	
	-1615 Jan 03 j 18:27	0° \approx		morning rise	-1611 Aug 28 j 23:49	6° Ω 05'00	
	-1615 Feb 12 j 21:30	0° \mathfrak{H}			-1611 Oct 04 j 07:42	0° \mathbb{M}	
evening set	-1615 Mar 01 j 03:42	11° \mathfrak{H} 47'49			-1611 Nov 17 j 19:52	0° $\underline{\mathfrak{A}}$	
	-1615 Mar 26 j 20:16	0° \mathbb{Y}			-1611 Dec 31 j 06:43	0° \mathbb{M}	
					-1610 Feb 12 j 00:35	0° \mathfrak{A}	
conjunction	-1615 Apr 26 j 11:05	21° \mathbb{Y} 01'57	0°00'-38	desc. node	-1610 Feb 14 j 11:20	1° \mathfrak{A} 43'26	
minimum elong	-1615 Apr 26 j 11:05	21° \mathbb{Y} 01'58	0°00'38		-1610 Mar 26 j 21:21	0° \mathfrak{Z}	
behind sun begin	-1615 Apr 25 j 12:57	20° \mathbb{Y} 24'32			-1610 May 11 j 09:22	0° \approx	
behind sun end	-1615 Apr 27 j 09:14	21° \mathbb{Y} 39'22		retrograde	-1610 Jul 25 j 22:27	29° \approx 07'31	
asc. node	-1615 Apr 27 j 12:29	21° \mathbb{Y} 44'51		min. Earth dist.	-1610 Aug 22 j 02:21	24° \approx 11'16	0.43169 AU
	-1615 May 09 j 19:27	0° \mathfrak{B}		greatest brilliancy	-1610 Aug 28 j 01:02	22° \approx 14'28	-2.5m
max. Earth dist.	-1615 May 21 j 09:54	7° \mathfrak{B} 42'10	2.59590 AU	opposition	-1610 Aug 29 j 20:20	21° \approx 38'40	-5°-21'-51
morning rise	-1615 Jun 16 j 21:56	25° \mathfrak{B} 01'24		direct	-1610 Sep 30 j 10:36	15° \approx 31'18	
	-1615 Jun 24 j 15:02	0° Π			-1610 Nov 23 j 00:48	0° \mathfrak{H}	
	-1615 Aug 10 j 22:56	0° \mathfrak{S}		asc. node	-1610 Dec 18 j 09:09	12° \mathfrak{H} 33'56	
	-1615 Sep 28 j 18:26	0° Ω			-1609 Jan 18 j 17:17	0° \mathbb{Y}	
	-1615 Nov 19 j 07:26	0° \mathbb{M}			-1609 Mar 10 j 07:09	0° \mathfrak{B}	
	-1614 Jan 20 j 16:21	0° $\underline{\mathfrak{A}}$			-1609 Apr 28 j 10:12	0° Π	
retrograde	-1614 Mar 03 j 04:52	8° $\underline{\mathfrak{A}}$ 38'09			-1609 Jun 15 j 13:40	0° \mathfrak{S}	
opposition	-1614 Apr 06 j 13:23	1° $\underline{\mathfrak{A}}$ 46'41	1°57'11	evening set	-1609 Jul 06 j 11:27	13° \mathfrak{S} 16'41	
greatest brilliancy	-1614 Apr 07 j 13:33	1° $\underline{\mathfrak{A}}$ 26'03	-2.1m		-1609 Aug 01 j 09:00	0° Ω	
	-1614 Apr 11 j 17:48	30° \mathbb{R} \mathbb{M}		max. Earth dist.	-1609 Aug 02 j 03:50	0° Ω 30'43	2.62702 AU
min. Earth dist.	-1614 Apr 15 j 01:42	28° \mathbb{M} 52'35	0.48668 AU				
desc. node	-1614 May 12 j 12:25	23° \mathbb{M} 23'13		conjunction	-1609 Aug 21 j 19:00	13° Ω 26'01	1°04'57
direct	-1614 May 14 j 10:50	23° \mathbb{M} 21'39		minimum elong	-1609 Aug 21 j 19:54	13° Ω 27'30	1°04'58
	-1614 Jun 16 j 07:18	0° $\underline{\mathfrak{A}}$			-1609 Sep 15 j 11:12	0° \mathbb{M}	
	-1614 Aug 11 j 03:20	0° \mathbb{M}		morning rise	-1609 Oct 07 j 05:49	14° \mathbb{M} 56'41	
	-1614 Sep 23 j 05:37	0° \mathfrak{A}			-1609 Oct 28 j 17:27	0° $\underline{\mathfrak{A}}$	
	-1614 Nov 02 j 17:22	0° \mathfrak{Z}			-1609 Dec 09 j 07:54	0° \mathbb{M}	
	-1614 Dec 13 j 00:40	0° \approx		desc. node	-1608 Jan 02 j 10:36	17° \mathbb{M} 50'42	
	-1613 Jan 23 j 08:20	0° \mathfrak{H}			-1608 Jan 18 j 15:53	0° \mathfrak{A}	
	-1613 Mar 07 j 07:15	0° \mathbb{Y}			-1608 Feb 27 j 08:00	0° \mathfrak{Z}	
asc. node	-1613 Mar 15 j 11:08	5° \mathbb{Y} 33'49			-1608 Apr 07 j 05:54	0° \approx	
evening set	-1613 Apr 19 j 17:57	29° \mathbb{Y} 09'50			-1608 May 18 j 22:02	0° \mathfrak{H}	
	-1613 Apr 21 j 00:24	0° \mathfrak{B}			-1608 Jul 04 j 22:08	0° \mathbb{Y}	
	-1613 Jun 06 j 04:07	0° Π		retrograde	-1608 Sep 11 j 13:47	23° \mathbb{Y} 48'41	
conjunction	-1613 Jun 08 j 09:54	1° Π 26'24	0°44'50	min. Earth dist.	-1608 Oct 13 j 20:55	16° \mathbb{Y} 45'23	0.55759 AU
minimum elong	-1613 Jun 08 j 08:34	1° Π 24'16	0°44'51	opposition	-1608 Oct 20 j 12:31	14° \mathbb{Y} 10'41	0°-40'-15
max. Earth dist.	-1613 Jun 16 j 02:57	6° Π 23'04	2.66031 AU	greatest brilliancy	-1608 Oct 20 j 06:44	14° \mathbb{Y} 16'17	-1.8m
	-1613 Jul 23 j 03:40	0° \mathfrak{S}		asc. node	-1608 Nov 04 j 08:11	9° \mathbb{Y} 02'40	
morning rise	-1613 Jul 24 j 20:18	1° \mathfrak{S} 04'35		direct	-1608 Nov 25 j 12:58	6° \mathbb{Y} 02'32	
	-1613 Sep 08 j 08:49	0° Ω			-1607 Feb 09 j 10:30	0° \mathfrak{B}	
	-1613 Oct 25 j 14:01	0° \mathbb{M}			-1607 Apr 05 j 21:13	0° Π	
	-1613 Dec 12 j 03:28	0° $\underline{\mathfrak{A}}$			-1607 May 26 j 07:01	0° \mathfrak{S}	
	-1612 Jan 30 j 08:42	0° \mathbb{M}			-1607 Jul 12 j 20:55	0° Ω	
	-1612 Mar 27 j 05:20	0° \mathfrak{A}		evening set	-1607 Aug 13 j 22:36	21° Ω 10'55	
desc. node	-1612 Mar 29 j 11:10	0° \mathfrak{A} 57'23		max. Earth dist.	-1607 Aug 26 j 22:21	0° \mathbb{M}	
retrograde	-1612 May 14 j 03:00	11° \mathfrak{A} 55'57			-1607 Aug 30 j 16:22	2° \mathbb{M} 34'22	2.53377 AU
opposition	-1612 Jun 13 j 09:37	6° \mathfrak{A} 54'58	-4°-55'-57	conjunction	-1607 Oct 02 j 07:16	25° \mathbb{M} 26'56	0°30'18
greatest brilliancy	-1612 Jun 13 j 20:57	6° \mathfrak{A} 47'22	-2.8m	minimum elong	-1607 Oct 02 j 08:35	25° \mathbb{M} 29'17	0°30'17
min. Earth dist.	-1612 Jun 15 j 18:26	6° \mathfrak{A} 16'53	0.37999 AU		-1607 Oct 08 j 15:28	0° $\underline{\mathfrak{A}}$	
direct	-1612 Jul 14 j 06:00	1° \mathfrak{A} 38'30			-1607 Nov 18 j 09:07	0° \mathbb{M}	
	-1612 Sep 28 j 09:18	0° \mathfrak{Z}		desc. node	-1607 Nov 19 j 08:50	0° \mathbb{M} 44'35	
	-1612 Nov 14 j 19:17	0° \approx		morning rise	-1607 Nov 24 j 09:18	4° \mathbb{M} 31'38	
	-1612 Dec 29 j 22:30	0° \mathfrak{H}			-1607 Dec 27 j 16:54	0° \mathfrak{A}	
asc. node	-1611 Jan 30 j 10:17	20° \mathfrak{H} 52'09			-1606 Feb 04 j 08:13	0° \mathfrak{Z}	
	-1611 Feb 13 j 07:57	0° \mathbb{Y}			-1606 Mar 15 j 03:11	0° \approx	
	-1611 Mar 31 j 15:05	0° \mathfrak{B}			-1606 Apr 24 j 01:15	0° \mathfrak{H}	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 30

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1606 Jun 05 j 08:24	0°♊				-1601 Jun 23 j 07:32	0°♎	
	-1606 Jul 22 j 07:53	0°♋		desc. node		-1601 Jul 12 j 05:43	11°♎50'37	
asc. node	-1606 Sep 22 j 07:59	29°♋06'08				-1601 Aug 08 j 05:09	0°♊	
	-1606 Sep 25 j 12:52	0°♊				-1601 Sep 18 j 12:25	0°♌	
retrograde	-1606 Oct 19 j 09:00	3°♊24'08				-1601 Oct 27 j 14:24	0°♍	
	-1606 Nov 10 j 16:58	30°♋				-1601 Dec 04 j 21:43	0°♎	
min. Earth dist.	-1606 Nov 25 j 09:34	24°♋41'14	0.64655 AU			-1600 Jan 12 j 13:04	0°♌	
opposition	-1606 Nov 28 j 11:20	23°♋27'17	2°30'22	evening set		-1600 Feb 06 j 17:07	19°♌04'55	
greatest brilliancy	-1606 Nov 28 j 00:57	23°♋37'41	-1.4m			-1600 Feb 21 j 09:43	0°♋	
direct	-1605 Jan 06 j 14:23	14°♋10'05				-1600 Apr 03 j 02:20	0°♊	
	-1605 Mar 07 j 05:24	0°♊						
	-1605 May 04 j 11:57	0°♋		conjunction		-1600 Apr 06 j 18:53	2°♊35'07	0°-22'-12
	-1605 Jun 23 j 07:27	0°♌		minimum elong		-1600 Apr 06 j 20:09	2°♊37'21	0°22'12
	-1605 Aug 08 j 00:13	0°♎		max. Earth dist.		-1600 May 09 j 14:04	25°♊06'15	2.55619 AU
	-1605 Sep 19 j 15:58	0°♊		asc. node		-1600 May 14 j 04:48	28°♊12'31	
evening set	-1605 Sep 29 j 16:33	7°♊18'58				-1600 May 16 j 20:55	0°♋	
desc. node	-1605 Oct 07 j 08:14	12°♊58'00		morning rise		-1600 May 31 j 11:59	9°♋43'09	
max. Earth dist.	-1605 Oct 20 j 09:09	22°♊42'36	2.40917 AU			-1600 Jul 01 j 16:09	0°♊	
	-1605 Oct 30 j 00:21	0°♌				-1600 Aug 18 j 08:39	0°♋	
						-1600 Oct 07 j 09:54	0°♌	
conjunction	-1605 Nov 26 j 08:07	21°♌01'36	0°-32'-46			-1600 Dec 02 j 05:51	0°♎	
minimum elong	-1605 Nov 26 j 05:54	20°♌57'17	0°32'46	retrograde		-1599 Feb 09 j 17:07	20°♎31'44	
	-1605 Dec 07 j 20:12	0°♍		opposition		-1599 Mar 17 j 15:29	12°♎57'40	3°22'21
	-1604 Jan 15 j 00:15	0°♎		greatest brilliancy		-1599 Mar 19 j 01:35	12°♎26'50	-1.9m
morning rise	-1604 Jan 31 j 12:09	12°♎57'06		min. Earth dist.		-1599 Mar 25 j 15:10	10°♎04'49	0.53778 AU
	-1604 Feb 22 j 09:49	0°♌		direct		-1599 Apr 26 j 04:43	3°♎45'24	
	-1604 Apr 01 j 21:48	0°♋		desc. node		-1599 May 29 j 04:35	10°♎13'07	
	-1604 May 13 j 08:11	0°♊				-1599 Jul 08 j 19:59	0°♊	
	-1604 Jun 26 j 13:51	0°♋				-1599 Aug 23 j 18:00	0°♌	
asc. node	-1604 Aug 09 j 06:49	27°♋07'02				-1599 Oct 03 j 15:28	0°♍	
	-1604 Aug 14 j 06:04	0°♊				-1599 Nov 12 j 01:15	0°♎	
	-1604 Oct 15 j 00:32	0°♋				-1599 Dec 21 j 14:31	0°♌	
retrograde	-1604 Nov 22 j 00:32	7°♋33'44				-1598 Jan 31 j 07:30	0°♋	
	-1604 Dec 26 j 18:57	30°♋				-1598 Mar 14 j 18:23	0°♊	
opposition	-1604 Dec 31 j 21:44	27°♋58'49	4°15'33	evening set		-1598 Apr 01 j 20:13	12°♊22'56	
greatest brilliancy	-1604 Dec 31 j 23:20	27°♋57'13	-1.2m	asc. node		-1598 Apr 01 j 03:53	11°♊55'12	
min. Earth dist.	-1603 Jan 01 j 15:59	27°♋40'38	0.67454 AU			-1598 Apr 28 j 02:26	0°♋	
direct	-1603 Feb 10 j 19:43	18°♋05'53						
	-1603 Apr 01 j 21:07	0°♋		conjunction		-1598 May 23 j 14:52	16°♋46'15	0°29'28
	-1603 May 30 j 18:34	0°♌		minimum elong		-1598 May 23 j 13:45	16°♋44'24	0°29'28
	-1603 Jul 17 j 16:37	0°♎		max. Earth dist.		-1598 Jun 06 j 17:27	25°♋55'19	2.64132 AU
desc. node	-1603 Aug 24 j 07:24	25°♎55'59				-1598 Jun 13 j 01:10	0°♊	
	-1603 Aug 29 j 23:32	0°♊		morning rise		-1598 Jul 10 j 13:38	17°♊37'05	
	-1603 Oct 09 j 09:32	0°♌				-1598 Jul 30 j 01:39	0°♋	
	-1603 Nov 17 j 02:30	0°♍				-1598 Sep 15 j 17:12	0°♌	
evening set	-1603 Nov 29 j 12:09	9°♍45'35				-1598 Nov 03 j 01:21	0°♎	
	-1603 Dec 25 j 03:32	0°♎				-1598 Dec 23 j 05:36	0°♊	
	-1602 Feb 01 j 11:52	0°♌				-1597 Feb 18 j 15:21	0°♌	
				retrograde		-1597 Apr 13 j 11:45	14°♌00'43	
conjunction	-1602 Feb 04 j 03:51	2°♌03'34	-1°-5'-6	desc. node		-1597 Apr 16 j 04:08	13°♌58'02	
minimum elong	-1602 Feb 04 j 04:57	2°♌05'41	1°05'08	opposition		-1597 May 15 j 02:41	8°♌26'55	-1°-53'-6
	-1602 Mar 13 j 00:09	0°♋		greatest brilliancy		-1597 May 15 j 18:06	8°♌15'32	-2.6m
max. Earth dist.	-1602 Mar 26 j 21:28	10°♋14'33	2.42822 AU	min. Earth dist.		-1597 May 21 j 16:13	6°♌31'16	0.41000 AU
morning rise	-1602 Apr 11 j 04:01	21°♋18'44		direct		-1597 Jun 17 j 18:11	1°♌58'48	
	-1602 Apr 23 j 08:49	0°♊				-1597 Aug 31 j 00:26	0°♍	
	-1602 Jun 06 j 00:41	0°♋				-1597 Oct 15 j 13:39	0°♎	
asc. node	-1602 Jun 27 j 05:08	13°♋56'55				-1597 Nov 27 j 09:56	0°♌	
	-1602 Jul 22 j 09:00	0°♊				-1596 Jan 09 j 09:25	0°♋	
	-1602 Sep 10 j 10:05	0°♋		asc. node		-1596 Feb 17 j 02:00	26°♋21'22	
	-1602 Nov 09 j 07:34	0°♌				-1596 Feb 22 j 12:28	0°♊	
retrograde	-1602 Dec 28 j 11:46	11°♌33'17				-1596 Apr 08 j 00:49	0°♋	
opposition	-1601 Feb 05 j 01:38	2°♌43'16	4°44'23	evening set		-1596 May 14 j 07:36	23°♋23'24	
greatest brilliancy	-1601 Feb 06 j 00:27	2°♌21'07	-1.4m			-1596 May 24 j 15:40	0°♊	
min. Earth dist.	-1601 Feb 09 j 16:56	0°♌55'24	0.63731 AU					
	-1601 Feb 12 j 03:00	30°♋		conjunction		-1596 Jun 30 j 17:53	23°♋38'35	1°02'02
direct	-1601 Mar 18 j 08:33	22°♋43'48		minimum elong		-1596 Jun 30 j 16:51	23°♋36'57	1°02'04
	-1601 Apr 24 j 05:05	0°♌		max. Earth dist.		-1596 Jun 29 j 13:45	22°♋53'47	2.67299 AU

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 31

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1596 Jul 10 j 17:18	0°☿		retrograde	-1591 Oct 05 j 09:51	19°♄13'34	
morning rise	-1596 Aug 14 j 20:05	22°♄27'50		asc. node	-1591 Oct 08 j 22:45	19°♄08'24	
	-1596 Aug 26 j 13:03	0°♂		min. Earth dist.	-1591 Nov 09 j 17:21	11°♄05'19	0.61850 AU
	-1596 Oct 11 j 16:17	0°♎		opposition	-1591 Nov 14 j 06:08	9°♄16'52	1°28'09
	-1596 Nov 26 j 00:56	0°♊		greatest brilliancy	-1591 Nov 13 j 21:00	9°♄25'59	-1.5m
	-1595 Jan 09 j 21:02	0°♋		direct	-1591 Dec 22 j 07:53	0°♄21'45	
	-1595 Feb 23 j 19:34	0°♌			-1590 Mar 20 j 09:40	0°♈	
desc. node	-1595 Mar 03 j 03:23	4°♌49'14			-1590 May 13 j 03:57	0°♄	
	-1595 Apr 11 j 21:06	0°♍			-1590 Jun 30 j 20:24	0°♈	
	-1595 Jun 19 j 16:42	0°♎			-1590 Aug 15 j 05:26	0°♎	
retrograde	-1595 Jun 30 j 23:20	0°♎51'35		evening set	-1590 Sep 10 j 02:53	18°♎00'27	
	-1595 Jul 12 j 02:35	30°♎♋		max. Earth dist.	-1590 Sep 25 j 02:36	28°♎43'32	2.45893 AU
min. Earth dist.	-1595 Jul 27 j 16:18	26°♋25'03	0.39195 AU		-1590 Sep 26 j 20:55	0°♊	
greatest brilliancy	-1595 Jul 31 j 17:37	25°♋15'12	-2.7m	desc. node	-1590 Oct 24 j 01:10	19°♊59'38	
opposition	-1595 Aug 02 j 05:21	24°♋49'21	-6°-41'-34				
direct	-1595 Sep 01 j 06:05	19°♋33'52		conjunction	-1590 Nov 02 j 17:33	27°♊15'51	0°-6'-31
	-1595 Oct 14 j 19:09	0°♎		minimum elong	-1590 Nov 02 j 17:08	27°♊15'05	0°06'32
	-1595 Dec 10 j 23:54	0°♏		behind sun begin	-1590 Nov 01 j 18:49	26°♊33'01	
asc. node	-1594 Jan 04 j 00:51	14°♏24'32		behind sun end	-1590 Nov 03 j 15:27	27°♊57'12	
	-1594 Jan 29 j 10:02	0°♐			-1590 Nov 06 j 08:24	0°♋	
	-1594 Mar 18 j 16:39	0°♑			-1590 Dec 15 j 08:14	0°♌	
	-1594 May 05 j 19:12	0°♈		morning rise	-1589 Jan 02 j 11:05	14°♌09'39	
evening set	-1594 Jun 21 j 18:51	29°♈32'55			-1589 Jan 22 j 15:44	0°♍	
	-1594 Jun 22 j 11:57	0°♄		greatest brilliancy	-1589 Jan 26 j 07:59	2°♍52'56	1.2m
max. Earth dist.	-1594 Jul 23 j 10:54	19°♄47'11	2.65039 AU		-1589 Mar 02 j 03:40	0°♎	
					-1589 Apr 10 j 17:26	0°♏	
conjunction	-1594 Aug 06 j 20:52	29°♄07'32	1°09'39		-1589 May 22 j 07:40	0°♐	
minimum elong	-1594 Aug 06 j 21:11	29°♄08'04	1°09'40		-1589 Jul 06 j 03:05	0°♑	
	-1594 Aug 08 j 05:05	0°♈		asc. node	-1589 Aug 26 j 22:10	0°♈25'25	
morning rise	-1594 Sep 21 j 05:46	29°♈09'57			-1589 Aug 26 j 02:50	0°♈	
	-1594 Sep 22 j 11:27	0°♎		retrograde	-1589 Nov 09 j 14:57	24°♈44'51	
	-1594 Nov 05 j 02:56	0°♊		opposition	-1589 Dec 19 j 17:18	14°♈58'21	3°43'46
	-1594 Dec 17 j 06:43	0°♋		min. Earth dist.	-1589 Dec 18 j 23:25	15°♈16'16	0.67121 AU
desc. node	-1593 Jan 19 j 03:25	23°♋59'39		greatest brilliancy	-1589 Dec 19 j 12:24	15°♈03'16	-1.3m
	-1593 Jan 27 j 06:42	0°♌		direct	-1588 Jan 29 j 02:08	5°♈16'02	
	-1593 Mar 08 j 17:09	0°♍			-1588 Apr 16 j 09:03	0°♄	
	-1593 Apr 18 j 15:37	0°♎			-1588 Jun 08 j 20:10	0°♈	
	-1593 Jun 01 j 10:04	0°♏			-1588 Jul 25 j 14:27	0°♎	
	-1593 Jul 29 j 01:13	0°♐			-1588 Sep 06 j 13:14	0°♊	
retrograde	-1593 Aug 26 j 12:45	5°♐15'37		desc. node	-1588 Sep 09 j 23:33	2°♊29'12	
	-1593 Sep 22 j 23:15	30°♐♏			-1588 Oct 16 j 21:39	0°♋	
min. Earth dist.	-1593 Sep 25 j 16:55	29°♏01'19	0.50972 AU	evening set	-1588 Nov 03 j 07:47	13°♋23'15	
greatest brilliancy	-1593 Oct 02 j 11:36	26°♏29'54	-2.1m		-1588 Nov 24 j 15:02	0°♌	
opposition	-1593 Oct 03 j 09:43	26°♏09'17	-2°-22'-32		-1587 Jan 01 j 16:32	0°♍	
direct	-1593 Nov 06 j 19:10	18°♏41'34					
asc. node	-1593 Nov 22 j 00:09	20°♏06'04		conjunction	-1587 Jan 06 j 17:40	3°♏58'37	-1°-2'-54
	-1593 Dec 24 j 05:06	0°♐		minimum elong	-1587 Jan 06 j 15:47	3°♏54'55	1°02'57
	-1592 Feb 22 j 11:35	0°♑			-1587 Feb 09 j 00:34	0°♎	
	-1592 Apr 14 j 10:00	0°♈		max. Earth dist.	-1587 Feb 11 j 18:46	2°♎07'56	2.38150 AU
	-1592 Jun 02 j 16:40	0°♄		morning rise	-1587 Mar 16 j 18:26	27°♎13'32	
	-1592 Jul 19 j 21:22	0°♈			-1587 Mar 20 j 11:38	0°♏	
evening set	-1592 Jul 29 j 01:45	5°♈59'57			-1587 Apr 30 j 19:10	0°♐	
max. Earth dist.	-1592 Aug 18 j 02:15	19°♈17'11	2.57591 AU		-1587 Jun 13 j 13:05	0°♑	
	-1592 Sep 02 j 22:13	0°♎		asc. node	-1587 Jul 13 j 21:50	19°♑42'24	
					-1587 Jul 30 j 09:58	0°♈	
conjunction	-1592 Sep 14 j 17:26	8°♎06'44	0°47'48		-1587 Sep 20 j 13:39	0°♄	
minimum elong	-1592 Sep 14 j 18:54	8°♎09'16	0°47'48	retrograde	-1587 Dec 13 j 18:47	28°♄15'03	
	-1592 Oct 15 j 19:30	0°♊		opposition	-1586 Jan 22 j 00:17	19°♄04'37	4°43'04
morning rise	-1592 Nov 03 j 09:26	13°♊26'13		greatest brilliancy	-1586 Jan 22 j 14:33	18°♄50'36	-1.3m
	-1592 Nov 25 j 20:01	0°♋		min. Earth dist.	-1586 Jan 25 j 03:20	17°♄50'52	0.65966 AU
desc. node	-1592 Dec 06 j 02:59	7°♋42'24		direct	-1586 Mar 04 j 08:26	9°♄03'24	
	-1591 Jan 04 j 11:27	0°♌			-1586 May 12 j 06:30	0°♈	
	-1591 Feb 12 j 09:57	0°♍			-1586 Jul 03 j 09:48	0°♎	
	-1591 Mar 23 j 11:46	0°♎		desc. node	-1586 Jul 28 j 22:37	16°♎50'05	
	-1591 May 02 j 18:52	0°♏			-1586 Aug 16 j 20:46	0°♊	
	-1591 Jun 14 j 22:51	0°♐			-1586 Sep 26 j 16:24	0°♋	
	-1591 Aug 04 j 05:46	0°♑			-1586 Nov 04 j 13:02	0°♌	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 32

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1586 Dec 12 j 16:23	0°☾		morning rise	-1581 Aug 01 j 20:51	9°☾08'02	
evening set	-1585 Jan 11 j 18:41	23°☾31'43			-1581 Sep 03 j 13:48	0°♈	
	-1585 Jan 20 j 03:40	0°≈			-1581 Oct 20 j 08:15	0°♍	
	-1585 Feb 28 j 19:44	0°♋			-1581 Dec 05 j 22:43	0°♊	
					-1580 Jan 22 j 01:31	0°♌	
conjunction	-1585 Mar 16 j 15:28	11°♋36'39	0°-43'-18		-1580 Mar 11 j 19:07	0°♍	
minimum elong	-1585 Mar 16 j 17:55	11°♋41'06	0°43'18	desc. node	-1580 Mar 19 j 20:45	4°♍29'31	
	-1585 Apr 11 j 07:50	0°♍		retrograde	-1580 Jun 01 j 03:44	29°♍42'36	
max. Earth dist.	-1585 Apr 26 j 16:31	10°♍43'49	2.50985 AU	opposition	-1580 Jul 01 j 15:30	24°♍37'48	-6°-12'-48
morning rise	-1585 May 14 j 09:52	22°♍52'14		greatest brilliancy	-1580 Jul 01 j 10:07	24°♍41'23	-2.9m
	-1585 May 24 j 23:43	0°♋		min. Earth dist.	-1580 Jun 30 j 21:12	24°♍49'59	0.37525 AU
asc. node	-1585 May 31 j 20:21	4°♋34'48		direct	-1580 Jul 31 j 12:32	19°♍39'40	
	-1585 Jul 09 j 20:59	0°♌			-1580 Sep 11 j 22:42	0°☾	
	-1585 Aug 27 j 03:27	0°☾			-1580 Nov 06 j 00:00	0°≈	
	-1585 Oct 18 j 04:50	0°♈			-1580 Dec 23 j 07:03	0°♋	
	-1585 Dec 24 j 23:07	0°♍		asc. node	-1579 Jan 20 j 15:43	18°♋20'38	
retrograde	-1584 Jan 23 j 01:08	4°♍31'10			-1579 Feb 07 j 16:56	0°♍	
	-1584 Feb 18 j 23:22	30°♌♈			-1579 Mar 26 j 13:36	0°♋	
opposition	-1584 Feb 29 j 05:24	26°♌22'26	4°12'29		-1579 May 12 j 22:39	0°♌	
greatest brilliancy	-1584 Mar 01 j 14:37	25°♌51'16	-1.6m	evening set	-1579 Jun 07 j 03:19	15°♌55'35	
min. Earth dist.	-1584 Mar 07 j 01:44	23°♌48'36	0.58336 AU		-1579 Jun 29 j 07:38	0°☾	
direct	-1584 Apr 09 j 19:14	16°♌41'52		max. Earth dist.	-1579 Jul 14 j 03:27	9°☾27'26	2.66571 AU
	-1584 May 30 j 05:04	0°♍					
desc. node	-1584 Jun 14 j 21:10	7°♍48'32		conjunction	-1579 Jul 23 j 09:45	15°☾23'43	1°09'54
	-1584 Jul 21 j 22:24	0°♊		minimum elong	-1579 Jul 23 j 09:29	15°☾23'17	1°09'56
	-1584 Sep 03 j 00:41	0°♌			-1579 Aug 15 j 00:29	0°♈	
	-1584 Oct 12 j 21:28	0°♍		morning rise	-1579 Sep 06 j 06:23	14°♌32'57	
	-1584 Nov 20 j 16:38	0°☾			-1579 Sep 29 j 13:09	0°♍	
	-1584 Dec 29 j 18:14	0°≈			-1579 Nov 12 j 17:25	0°♊	
	-1583 Feb 08 j 00:41	0°♋			-1579 Dec 25 j 15:51	0°♌	
evening set	-1583 Mar 13 j 05:24	23°♋47'30		desc. node	-1578 Feb 04 j 20:21	29°♌25'01	
	-1583 Mar 22 j 02:15	0°♍			-1578 Feb 05 j 15:47	0°♍	
asc. node	-1583 Apr 17 j 19:18	18°♍21'01			-1578 Mar 19 j 09:01	0°☾	
	-1583 May 05 j 03:18	0°♋			-1578 May 01 j 09:32	0°≈	
					-1578 Jun 20 j 12:25	0°♋	
conjunction	-1583 May 06 j 17:37	1°♋03'51	0°11'07	retrograde	-1578 Aug 07 j 04:59	13°♋33'27	
minimum elong	-1583 May 06 j 17:06	1°♋02'59	0°11'07	min. Earth dist.	-1578 Sep 04 j 07:09	8°♋11'24	0.45839 AU
behind sun begin	-1583 May 06 j 01:33	0°♋37'05		greatest brilliancy	-1578 Sep 10 j 19:02	5°♋56'15	-2.3m
behind sun end	-1583 May 07 j 08:39	1°♋28'52		opposition	-1578 Sep 12 j 09:25	5°♋22'48	-4°-17'-39
max. Earth dist.	-1583 May 27 j 16:20	14°♋53'22	2.61426 AU		-1578 Oct 01 j 10:31	30°♌≈	
	-1583 Jun 19 j 22:52	0°♌		direct	-1578 Oct 14 j 22:25	28°≈45'17	
morning rise	-1583 Jun 25 j 18:08	3°♌43'56			-1578 Oct 29 j 02:09	0°♋	
	-1583 Aug 06 j 02:48	0°☾		asc. node	-1578 Dec 08 j 14:45	13°♋28'34	
	-1583 Sep 23 j 09:51	0°♈			-1577 Jan 10 j 16:15	0°♍	
	-1583 Nov 12 j 11:04	0°♍			-1577 Mar 04 j 09:22	0°♋	
	-1582 Jan 06 j 20:07	0°♊			-1577 Apr 23 j 07:47	0°♌	
retrograde	-1582 Mar 16 j 23:47	20°♊40'15			-1577 Jun 10 j 19:51	0°☾	
opposition	-1582 Apr 19 j 08:26	14°♊15'54	0°47'33	evening set	-1577 Jul 14 j 23:21	21°☾42'30	
greatest brilliancy	-1582 Apr 19 j 19:04	14°♊07'12	-2.3m		-1577 Jul 27 j 18:30	0°♈	
min. Earth dist.	-1582 Apr 27 j 15:29	11°♊33'26	0.45743 AU	max. Earth dist.	-1577 Aug 08 j 02:41	7°♌25'35	2.61086 AU
desc. node	-1582 May 02 j 19:59	9°♊59'39					
direct	-1582 May 25 j 22:10	6°♊27'27		conjunction	-1577 Aug 30 j 14:28	22°♌23'32	1°00'05
	-1582 Jul 31 j 20:43	0°♌		minimum elong	-1577 Aug 30 j 15:39	22°♌25'31	1°00'05
	-1582 Sep 15 j 18:59	0°♍			-1577 Sep 10 j 20:24	0°♍	
	-1582 Oct 27 j 08:30	0°☾		morning rise	-1577 Oct 16 j 22:46	25°♍01'07	
	-1582 Dec 07 j 07:06	0°≈			-1577 Oct 23 j 23:31	0°♊	
	-1581 Jan 18 j 01:26	0°♋			-1577 Dec 04 j 08:51	0°♌	
	-1581 Mar 02 j 08:02	0°♍		desc. node	-1577 Dec 23 j 18:58	14°♌26'37	
asc. node	-1581 Mar 05 j 18:08	2°♍19'20			-1576 Jan 13 j 10:33	0°♍	
	-1581 Apr 16 j 06:28	0°♋			-1576 Feb 21 j 19:26	0°☾	
evening set	-1581 Apr 29 j 07:51	8°♋32'17			-1576 Apr 01 j 08:26	0°≈	
	-1581 Jun 01 j 13:05	0°♌			-1576 May 12 j 08:18	0°♋	
					-1576 Jun 26 j 06:47	0°♍	
conjunction	-1581 Jun 17 j 01:11	9°♌55'46	0°52'10		-1576 Aug 27 j 02:42	0°♋	
minimum elong	-1581 Jun 16 j 23:53	9°♌53'41	0°52'11	retrograde	-1576 Sep 20 j 14:07	3°♋46'55	
max. Earth dist.	-1581 Jun 21 j 12:16	12°♌46'46	2.66717 AU		-1576 Oct 13 j 17:02	30°♌♍	
	-1581 Jul 18 j 12:37	0°☾		min. Earth dist.	-1576 Oct 23 j 23:58	26°♍18'52	0.58133 AU

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 33

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

asc. node	-1576 Oct 25 j 15:00	25° Υ 40'46		evening set	-1571 Dec 15 j 03:03	25° \mathcal{Z} 53'32	
opposition	-1576 Oct 29 j 22:11	23° Υ 59'09	0°11'15		-1571 Dec 20 j 08:03	0° \mathcal{Z}	
greatest brilliancy	-1576 Nov 02 j 16:22	22° Υ 31'35	-1.7m		-1570 Jan 27 j 17:01	0° \approx	
direct	-1576 Dec 05 j 17:34	15° Υ 32'16					
	-1575 Jan 30 j 13:04	0° \mathcal{B}		conjunction	-1570 Feb 19 j 12:52	17° \approx 27'53	0°-59'-56
	-1575 Mar 30 j 19:00	0° Π		minimum elong	-1570 Feb 19 j 15:08	17° \approx 32'11	0°59'58
	-1575 May 21 j 04:02	0° \mathcal{E}			-1570 Mar 08 j 05:57	0° \mathcal{H}	
	-1575 Jul 08 j 02:50	0° \mathcal{Q}		max. Earth dist.	-1570 Apr 09 j 00:03	23° \mathcal{H} 09'52	2.45792 AU
	-1575 Aug 22 j 07:20	0° \mathcal{M}			-1570 Apr 18 j 14:41	0° Υ	
evening set	-1575 Aug 23 j 10:11	0° \mathcal{M} 45'55		morning rise	-1570 Apr 23 j 23:52	3° Υ 47'29	
max. Earth dist.	-1575 Sep 07 j 20:05	11° \mathcal{M} 25'17	2.50829 AU		-1570 Jun 01 j 05:11	0° \mathcal{B}	
	-1575 Oct 04 j 00:16	0° \mathcal{A}		asc. node	-1570 Jun 17 j 12:29	10° \mathcal{B} 48'35	
					-1570 Jul 17 j 07:18	0° Π	
conjunction	-1575 Oct 13 j 00:55	6° \mathcal{A} 32'44	0°18'03		-1570 Sep 04 j 11:58	0° \mathcal{E}	
minimum elong	-1575 Oct 13 j 01:50	6° \mathcal{A} 34'24	0°18'03		-1570 Oct 30 j 05:18	0° \mathcal{Q}	
desc. node	-1575 Nov 09 j 17:44	27° \mathcal{A} 02'55		retrograde	-1569 Jan 06 j 08:09	19° \mathcal{Q} 53'17	
	-1575 Nov 13 j 15:55	0° \mathcal{M}		opposition	-1569 Feb 13 j 11:50	11° \mathcal{Q} 16'28	4°37'58
morning rise	-1575 Dec 07 j 12:33	18° \mathcal{M} 09'43		greatest brilliancy	-1569 Feb 14 j 15:05	10° \mathcal{Q} 50'16	-1.5m
	-1575 Dec 22 j 20:48	0° \mathcal{Z}		min. Earth dist.	-1569 Feb 18 j 23:02	9° \mathcal{Q} 10'32	0.62074 AU
	-1574 Jan 30 j 08:49	0° \mathcal{Z}		direct	-1569 Mar 26 j 15:22	1° \mathcal{Q} 20'46	
	-1574 Mar 10 j 00:28	0° \approx			-1569 Jun 15 j 21:49	0° \mathcal{M}	
	-1574 Apr 18 j 18:14	0° \mathcal{H}		desc. node	-1569 Jul 02 j 14:27	9° \mathcal{M} 55'21	
	-1574 May 30 j 16:29	0° Υ			-1569 Aug 02 j 08:16	0° \mathcal{A}	
	-1574 Jul 15 j 13:22	0° \mathcal{B}			-1569 Sep 13 j 03:14	0° \mathcal{M}	
	-1574 Sep 09 j 19:09	0° Π			-1569 Oct 22 j 10:29	0° \mathcal{Z}	
asc. node	-1574 Sep 12 j 14:08	1° Π 09'58			-1569 Nov 29 j 20:51	0° \mathcal{Z}	
retrograde	-1574 Oct 27 j 05:12	11° Π 37'13			-1568 Jan 07 j 14:45	0° \approx	
min. Earth dist.	-1574 Dec 04 j 02:50	2° Π 36'44	0.65802 AU		-1568 Feb 16 j 13:52	0° \mathcal{H}	
opposition	-1574 Dec 06 j 08:29	1° Π 42'54	3°00'49	evening set	-1568 Feb 20 j 08:13	2° \mathcal{H} 45'46	
greatest brilliancy	-1574 Dec 05 j 23:13	1° Π 52'12	-1.3m		-1568 Mar 29 j 08:33	0° Υ	
	-1574 Dec 10 j 15:52	30° \mathcal{R} \mathcal{B}					
direct	-1573 Jan 14 j 23:03	22° \mathcal{B} 15'29		conjunction	-1568 Apr 18 j 06:21	13° Υ 48'01	0°-9'-39
	-1573 Feb 23 j 06:23	0° Π		minimum elong	-1568 Apr 18 j 06:52	13° Υ 48'54	0°09'40
	-1573 Apr 28 j 05:56	0° \mathcal{E}		behind sun begin	-1568 Apr 17 j 12:26	13° Υ 17'18	
	-1573 Jun 18 j 02:40	0° \mathcal{Q}		behind sun end	-1568 Apr 19 j 01:18	14° Υ 20'28	
	-1573 Aug 03 j 04:04	0° \mathcal{M}		asc. node	-1568 May 04 j 10:48	24° Υ 48'14	
	-1573 Sep 14 j 22:42	0° \mathcal{A}			-1568 May 12 j 04:29	0° \mathcal{B}	
desc. node	-1573 Sep 27 j 16:25	9° \mathcal{A} 18'09		max. Earth dist.	-1568 May 16 j 13:00	2° \mathcal{B} 54'29	2.57923 AU
evening set	-1573 Oct 11 j 19:16	19° \mathcal{A} 47'47		morning rise	-1568 Jun 10 j 01:21	19° \mathcal{B} 03'48	
	-1573 Oct 25 j 07:32	0° \mathcal{M}			-1568 Jun 26 j 22:36	0° Π	
max. Earth dist.	-1573 Nov 11 j 12:38	13° \mathcal{M} 12'01	2.38627 AU		-1568 Aug 13 j 08:55	0° \mathcal{E}	
	-1573 Dec 03 j 02:44	0° \mathcal{Z}			-1568 Oct 01 j 14:56	0° \mathcal{Q}	
					-1568 Nov 23 j 13:37	0° \mathcal{M}	
conjunction	-1573 Dec 10 j 22:16	6° \mathcal{Z} 07'48	0°-46'-21		-1567 Feb 08 j 20:29	0° \mathcal{A}	
minimum elong	-1573 Dec 10 j 19:24	6° \mathcal{Z} 02'10	0°46'20	retrograde	-1567 Feb 21 j 11:45	0° \mathcal{A} 55'29	
	-1572 Jan 10 j 05:38	0° \mathcal{Z}			-1567 Mar 05 j 14:26	30° \mathcal{R} \mathcal{M}	
morning rise	-1572 Feb 17 j 05:09	29° \mathcal{Z} 42'49		opposition	-1567 Mar 28 j 13:35	23° \mathcal{M} 43'51	2°38'19
	-1572 Feb 17 j 14:02	0° \approx		greatest brilliancy	-1567 Mar 29 j 19:41	23° \mathcal{M} 17'22	-2.0m
	-1572 Mar 28 j 00:42	0° \mathcal{H}		min. Earth dist.	-1567 Apr 05 j 22:22	20° \mathcal{M} 47'38	0.51008 AU
	-1572 May 08 j 08:28	0° Υ		direct	-1567 May 06 j 06:59	14° \mathcal{M} 54'40	
	-1572 Jun 21 j 07:32	0° \mathcal{B}		desc. node	-1567 May 19 j 13:42	16° \mathcal{M} 05'05	
asc. node	-1572 Jul 30 j 12:46	24° \mathcal{B} 51'46			-1567 Jun 27 j 17:05	0° \mathcal{A}	
	-1572 Aug 08 j 02:01	0° Π			-1567 Aug 16 j 11:13	0° \mathcal{M}	
	-1572 Oct 03 j 09:54	0° \mathcal{E}			-1567 Sep 27 j 10:17	0° \mathcal{Z}	
retrograde	-1572 Nov 29 j 20:07	15° \mathcal{E} 20'46			-1567 Nov 06 j 08:33	0° \mathcal{Z}	
opposition	-1571 Jan 08 j 12:54	5° \mathcal{E} 53'43	4°29'00		-1567 Dec 16 j 06:08	0° \approx	
greatest brilliancy	-1571 Jan 08 j 18:49	5° \mathcal{E} 47'50	-1.2m		-1566 Jan 26 j 05:38	0° \mathcal{H}	
min. Earth dist.	-1571 Jan 10 j 03:39	5° \mathcal{E} 15'16	0.67195 AU		-1566 Mar 09 j 21:30	0° Υ	
	-1571 Jan 24 j 11:17	30° \mathcal{R} Π		asc. node	-1566 Mar 22 j 09:01	8° Υ 32'08	
direct	-1571 Feb 18 j 15:54	25° Π 56'27		evening set	-1566 Apr 12 j 06:21	22° Υ 36'27	
	-1571 Mar 17 j 23:38	0° \mathcal{E}			-1566 Apr 23 j 09:20	0° \mathcal{B}	
	-1571 May 24 j 05:40	0° \mathcal{Q}					
	-1571 Jul 12 j 07:05	0° \mathcal{M}		conjunction	-1566 Jun 01 j 18:50	25° \mathcal{B} 43'45	0°38'47
desc. node	-1571 Aug 14 j 14:51	22° \mathcal{M} 39'39		minimum elong	-1566 Jun 01 j 17:33	25° \mathcal{B} 41'39	0°38'48
	-1571 Aug 24 j 22:48	0° \mathcal{A}			-1566 Jun 08 j 09:52	0° Π	
	-1571 Oct 04 j 12:08	0° \mathcal{M}		max. Earth dist.	-1566 Jun 12 j 08:34	2° Π 32'15	2.65293 AU
	-1571 Nov 12 j 06:26	0° \mathcal{Z}		morning rise	-1566 Jul 18 j 19:35	25° Π 49'32	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 34

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1566 Jul 25 j 09:13	0°☿		direct	-1561 Nov 18 j 08:33	29°♄16'54	
	-1566 Sep 10 j 18:31	0°♌			-1561 Nov 29 j 02:38	0°♑	
	-1566 Oct 28 j 10:12	0°♍			-1560 Feb 15 j 02:26	0°♄	
	-1566 Dec 15 j 22:35	0°♊			-1560 Apr 08 j 20:07	0°♈	
	-1565 Feb 05 j 14:03	0°♈			-1560 May 28 j 18:01	0°☿	
desc. node	-1565 Apr 06 j 12:33	26°♈10'03			-1560 Jul 15 j 04:47	0°♌	
retrograde	-1565 Apr 30 j 23:38	29°♈36'00		evening set	-1560 Aug 07 j 01:07	15°♌00'18	
opposition	-1565 May 31 j 15:41	24°♈25'07	-3°-38'-44	max. Earth dist.	-1560 Aug 25 j 03:04	27°♌09'50	2.55334 AU
greatest brilliancy	-1565 Jun 01 j 09:46	24°♈12'35	-2.8m		-1560 Aug 29 j 06:59	0°♍	
min. Earth dist.	-1565 Jun 05 j 05:17	23°♈09'16	0.39038 AU				
direct	-1565 Jul 02 j 15:38	18°♈40'55		conjunction	-1560 Sep 24 j 13:10	18°♍12'43	0°38'20
	-1565 Aug 15 j 10:25	0°♊		minimum elong	-1560 Sep 24 j 14:37	18°♍15'16	0°38'19
	-1565 Oct 06 j 17:05	0°♈			-1560 Oct 11 j 03:03	0°♊	
	-1565 Nov 20 j 12:48	0°♍		morning rise	-1560 Nov 14 j 22:50	25°♊28'10	
	-1564 Jan 03 j 12:36	0°♈			-1560 Nov 21 j 00:32	0°♈	
asc. node	-1564 Feb 07 j 08:14	23°♈25'14		desc. node	-1560 Nov 26 j 10:13	4°♈03'09	
	-1564 Feb 17 j 05:55	0°♑			-1560 Dec 30 j 12:17	0°♊	
	-1564 Apr 03 j 03:15	0°♄			-1559 Feb 07 j 06:46	0°♈	
	-1564 May 19 j 23:09	0°♈			-1559 Mar 18 j 04:08	0°♍	
evening set	-1564 May 23 j 03:43	2°♈01'49			-1559 Apr 27 j 04:45	0°♈	
max. Earth dist.	-1564 Jul 04 j 22:08	29°♈14'21	2.67272 AU		-1559 Jun 08 j 17:25	0°♑	
	-1564 Jul 06 j 02:47	0°☿			-1559 Jul 26 j 15:18	0°♄	
				asc. node	-1559 Sep 29 j 05:50	26°♄36'58	
conjunction	-1564 Jul 09 j 01:11	1°☿52'12	1°06'04	retrograde	-1559 Oct 13 j 12:31	27°♄54'29	
minimum elong	-1564 Jul 09 j 00:24	1°☿50'56	1°06'06	min. Earth dist.	-1559 Nov 18 j 19:21	19°♄26'11	0.63511 AU
	-1564 Aug 21 j 21:17	0°♌		opposition	-1559 Nov 22 j 12:27	17°♄56'56	2°06'00
morning rise	-1564 Aug 22 j 22:08	0°♌40'12		greatest brilliancy	-1559 Nov 22 j 01:56	18°♄07'29	-1.4m
	-1564 Oct 06 j 18:43	0°♍		direct	-1559 Dec 31 j 04:23	8°♄48'53	
	-1564 Nov 20 j 15:53	0°♊			-1558 Mar 12 j 10:04	0°♈	
	-1563 Jan 03 j 16:14	0°♈			-1558 May 07 j 12:37	0°☿	
	-1563 Feb 16 j 05:44	0°♊			-1558 Jun 25 j 21:14	0°♌	
desc. node	-1563 Feb 21 j 12:38	3°♊38'15			-1558 Aug 10 j 11:52	0°♍	
	-1563 Apr 01 j 10:29	0°♈		evening set	-1558 Sep 20 j 23:01	29°♍06'16	
	-1563 May 20 j 11:52	0°♍			-1558 Sep 22 j 04:44	0°♊	
retrograde	-1563 Jul 15 j 14:51	17°♍44'56		max. Earth dist.	-1558 Oct 07 j 20:09	11°♊26'03	2.43081 AU
min. Earth dist.	-1563 Aug 11 j 07:58	13°♍06'03	0.41186 AU	desc. node	-1558 Oct 14 j 09:25	16°♊17'21	
greatest brilliancy	-1563 Aug 16 j 14:22	11°♍28'09	-2.6m		-1558 Nov 01 j 15:18	0°♈	
opposition	-1563 Aug 18 j 09:16	10°♍54'34	-6°-4'-50				
direct	-1563 Sep 18 j 05:38	5°♍11'58		conjunction	-1558 Nov 15 j 17:00	10°♈44'32	0°-21'-33
	-1563 Dec 01 j 04:37	0°♈		minimum elong	-1558 Nov 15 j 15:33	10°♈41'45	0°21'34
asc. node	-1563 Dec 25 j 07:16	13°♈17'52			-1558 Dec 10 j 13:25	0°♊	
	-1562 Jan 22 j 19:22	0°♑			-1557 Jan 17 j 18:56	0°♈	
	-1562 Mar 13 j 05:41	0°♄		morning rise	-1557 Jan 18 j 14:13	0°♈37'54	
	-1562 Apr 30 j 20:55	0°♈			-1557 Feb 25 j 04:59	0°♍	
	-1562 Jun 17 j 19:37	0°☿			-1557 Apr 05 j 16:49	0°♈	
evening set	-1562 Jun 30 j 04:53	7°☿51'18			-1557 May 17 j 03:09	0°♑	
max. Earth dist.	-1562 Jul 29 j 03:14	26°☿26'25	2.63852 AU		-1557 Jun 30 j 12:03	0°♄	
	-1562 Aug 03 j 14:39	0°♌		asc. node	-1557 Aug 17 j 04:44	29°♄04'21	
					-1557 Aug 18 j 20:20	0°♈	
conjunction	-1562 Aug 15 j 08:28	7°♌41'10	1°07'28		-1557 Oct 27 j 06:47	0°☿	
minimum elong	-1562 Aug 15 j 09:08	7°♌42'15	1°07'30	retrograde	-1557 Nov 17 j 07:36	2°☿34'08	
	-1562 Sep 17 j 19:31	0°♍			-1557 Dec 07 j 01:12	30°♈	
morning rise	-1562 Sep 30 j 05:40	8°♍27'10		opposition	-1557 Dec 27 j 07:32	22°♈53'44	4°03'31
	-1562 Oct 31 j 06:44	0°♊		greatest brilliancy	-1557 Dec 27 j 06:05	22°♈55'11	-1.2m
	-1562 Dec 12 j 03:33	0°♈		min. Earth dist.	-1557 Dec 27 j 10:02	22°♈51'14	0.67436 AU
desc. node	-1561 Jan 09 j 12:08	20°♈51'45		direct	-1556 Feb 05 j 23:59	13°♈04'55	
	-1561 Jan 21 j 18:45	0°♊			-1556 Apr 07 j 19:41	0°☿	
	-1561 Mar 02 j 18:07	0°♈			-1556 Jun 03 j 01:23	0°♌	
	-1561 Apr 12 j 00:36	0°♍			-1556 Jul 20 j 12:19	0°♍	
	-1561 May 24 j 07:58	0°♈		desc. node	-1556 Aug 31 j 08:56	29°♍02'11	
	-1561 Jul 12 j 16:54	0°♑			-1556 Sep 01 j 17:02	0°♊	
retrograde	-1561 Sep 05 j 12:10	16°♑34'25			-1556 Oct 12 j 03:15	0°♈	
min. Earth dist.	-1561 Oct 06 j 20:17	9°♑52'29	0.53678 AU	evening set	-1556 Nov 17 j 18:42	28°♈21'32	
greatest brilliancy	-1561 Oct 13 j 12:08	7°♑19'59	-1.9m		-1556 Nov 19 j 20:55	0°♊	
opposition	-1561 Oct 14 j 00:25	7°♑08'14	-1°-21'-43		-1556 Dec 27 j 21:59	0°♈	
	-1561 Nov 07 j 23:18	30°♈					
asc. node	-1561 Nov 12 j 06:13	29°♈31'37		conjunction	-1555 Jan 22 j 20:36	20°♈22'46	-1°-6'-1

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 35

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

minimum elong	-1555 Jan 22 j 20:25	20° $\overline{\text{C}}$ 22'25	1°06'04		-1550 Mar 05 j 23:39	0° $\overline{\text{M}}$	
	-1555 Feb 04 j 05:28	0° \approx		retrograde	-1550 Mar 31 j 20:51	3° $\overline{\text{M}}$ 44'40	
max. Earth dist.	-1555 Mar 12 j 21:57	27° \approx 56'28	2.40517 AU	desc. node	-1550 Apr 23 j 05:16	0° $\overline{\text{M}}$ 43'35	
	-1555 Mar 15 j 16:10	0° H			-1550 Apr 25 j 22:24	30° $\overline{\text{R}}$ $\underline{\text{A}}$	
morning rise	-1555 Mar 31 j 14:18	11° H 45'21		opposition	-1550 May 03 j 07:19	27° $\underline{\text{A}}$ 48'26	0°-37'-51
	-1555 Apr 25 j 22:47	0° $\overline{\text{Y}}$		greatest brilliancy	-1550 May 03 j 14:04	27° $\underline{\text{A}}$ 43'12	-2.5m
	-1555 Jun 08 j 13:49	0° $\overline{\text{B}}$		min. Earth dist.	-1550 May 10 j 22:35	25° $\underline{\text{A}}$ 27'05	0.43000 AU
asc. node	-1555 Jul 04 j 02:51	16° $\overline{\text{B}}$ 44'53		direct	-1550 Jun 07 j 07:48	20° $\underline{\text{A}}$ 42'52	
	-1555 Jul 25 j 00:58	0° $\overline{\text{II}}$			-1550 Jul 16 j 08:48	0° $\overline{\text{M}}$	
	-1555 Sep 13 j 17:45	0° $\overline{\text{S}}$			-1550 Sep 07 j 03:22	0° $\overline{\text{A}}$	
	-1555 Nov 17 j 10:28	0° $\overline{\text{O}}$			-1550 Oct 20 j 10:53	0° $\overline{\text{C}}$	
retrograde	-1555 Dec 22 j 02:19	6° $\overline{\text{O}}$ 15'21			-1550 Dec 01 j 06:35	0° \approx	
	-1554 Jan 22 j 19:17	30° $\overline{\text{R}}$ $\overline{\text{S}}$			-1549 Jan 12 j 14:37	0° H	
opposition	-1554 Jan 29 j 23:56	27° $\overline{\text{S}}$ 15'49	4°45'13	asc. node	-1549 Feb 23 j 23:46	29° H 07'55	
greatest brilliancy	-1554 Jan 30 j 19:02	26° $\overline{\text{S}}$ 57'10	-1.3m		-1549 Feb 25 j 06:36	0° $\overline{\text{Y}}$	
min. Earth dist.	-1554 Feb 02 j 23:29	25° $\overline{\text{S}}$ 42'34	0.64860 AU		-1549 Apr 11 j 11:29	0° $\overline{\text{B}}$	
direct	-1554 Mar 12 j 08:18	17° $\overline{\text{S}}$ 14'38		evening set	-1549 May 08 j 14:16	17° $\overline{\text{B}}$ 35'36	
	-1554 May 02 j 07:47	0° $\overline{\text{O}}$			-1549 May 27 j 21:45	0° $\overline{\text{II}}$	
	-1554 Jun 27 j 04:04	0° $\overline{\text{M}}$					
desc. node	-1554 Jul 19 j 07:12	14° $\overline{\text{M}}$ 11'07		conjunction	-1549 Jun 25 j 13:02	18° $\overline{\text{II}}$ 17'18	0°58'21
	-1554 Aug 11 j 10:59	0° $\underline{\text{A}}$		minimum elong	-1549 Jun 25 j 11:52	18° $\overline{\text{II}}$ 15'25	0°58'22
	-1554 Sep 21 j 13:51	0° $\overline{\text{M}}$		max. Earth dist.	-1549 Jun 26 j 20:05	19° $\overline{\text{II}}$ 06'45	2.67140 AU
	-1554 Oct 30 j 13:56	0° $\overline{\text{A}}$			-1549 Jul 13 j 22:08	0° $\overline{\text{S}}$	
	-1554 Dec 07 j 19:16	0° $\overline{\text{C}}$		morning rise	-1549 Aug 09 j 21:39	17° $\overline{\text{S}}$ 13'15	
	-1553 Jan 15 j 08:02	0° \approx			-1549 Aug 29 j 20:10	0° $\overline{\text{O}}$	
evening set	-1553 Jan 26 j 16:42	8° \approx 41'45			-1549 Oct 15 j 05:50	0° $\overline{\text{M}}$	
	-1553 Feb 24 j 01:31	0° H			-1549 Nov 30 j 02:45	0° $\underline{\text{A}}$	
					-1548 Jan 14 j 19:24	0° $\overline{\text{M}}$	
conjunction	-1553 Mar 29 j 12:55	24° H 17'11	0°-31'-26		-1548 Mar 01 j 07:38	0° $\overline{\text{A}}$	
minimum elong	-1553 Mar 29 j 14:46	24° H 20'28	0°31'25	desc. node	-1548 Mar 10 j 04:40	5° $\overline{\text{A}}$ 32'52	
	-1553 Apr 06 j 14:36	0° $\overline{\text{Y}}$			-1548 Apr 21 j 14:00	0° $\overline{\text{C}}$	
max. Earth dist.	-1553 May 04 j 22:48	19° $\overline{\text{Y}}$ 38'27	2.53615 AU	retrograde	-1548 Jun 18 j 12:20	17° $\overline{\text{C}}$ 47'52	
	-1553 May 20 j 06:30	0° $\overline{\text{B}}$		min. Earth dist.	-1548 Jul 16 j 01:44	13° $\overline{\text{C}}$ 18'27	0.38091 AU
asc. node	-1553 May 22 j 02:40	1° $\overline{\text{B}}$ 13'57		opposition	-1548 Jul 19 j 17:36	12° $\overline{\text{C}}$ 18'19	-6°-46'-33
morning rise	-1553 May 24 j 23:23	3° $\overline{\text{B}}$ 08'47		greatest brilliancy	-1548 Jul 18 j 17:37	12° $\overline{\text{C}}$ 34'46	-2.8m
	-1553 Jul 05 j 01:00	0° $\overline{\text{II}}$		direct	-1548 Aug 18 j 08:54	7° $\overline{\text{C}}$ 17'31	
	-1553 Aug 21 j 21:46	0° $\overline{\text{S}}$			-1548 Oct 25 j 20:00	0° \approx	
	-1553 Oct 11 j 15:16	0° $\overline{\text{O}}$			-1548 Dec 16 j 00:00	0° H	
	-1553 Dec 09 j 12:21	0° $\overline{\text{M}}$		asc. node	-1547 Jan 10 j 22:31	16° H 11'21	
retrograde	-1552 Feb 02 j 09:33	13° $\overline{\text{M}}$ 52'09			-1547 Feb 01 j 20:21	0° $\overline{\text{Y}}$	
opposition	-1552 Mar 09 j 21:39	6° $\overline{\text{M}}$ 01'47	3°46'49		-1547 Mar 21 j 09:53	0° $\overline{\text{B}}$	
greatest brilliancy	-1552 Mar 11 j 08:10	5° $\overline{\text{M}}$ 29'58	-1.7m		-1547 May 08 j 03:44	0° $\overline{\text{II}}$	
min. Earth dist.	-1552 Mar 17 j 10:10	3° $\overline{\text{M}}$ 15'49	0.55906 AU	evening set	-1547 Jun 15 j 13:27	24° $\overline{\text{II}}$ 11'59	
	-1552 Mar 27 j 06:42	30° $\overline{\text{R}}$ $\underline{\text{O}}$			-1547 Jun 24 j 17:00	0° $\overline{\text{S}}$	
direct	-1552 Apr 18 j 23:31	26° $\overline{\text{O}}$ 34'41		max. Earth dist.	-1547 Jul 19 j 13:28	15° $\overline{\text{S}}$ 51'55	2.65825 AU
	-1552 May 12 j 14:44	0° $\overline{\text{M}}$					
desc. node	-1552 Jun 05 j 05:36	8° $\overline{\text{M}}$ 42'21		conjunction	-1547 Jul 31 j 16:02	23° $\overline{\text{S}}$ 40'02	1°10'16
	-1552 Jul 14 j 08:29	0° $\underline{\text{A}}$		minimum elong	-1547 Jul 31 j 16:06	23° $\overline{\text{S}}$ 40'09	1°10'17
	-1552 Aug 27 j 20:13	0° $\overline{\text{M}}$			-1547 Aug 10 j 10:26	0° $\overline{\text{O}}$	
	-1552 Oct 07 j 05:58	0° $\overline{\text{A}}$		morning rise	-1547 Sep 14 j 17:51	23° $\overline{\text{O}}$ 14'38	
	-1552 Nov 15 j 08:28	0° $\overline{\text{C}}$			-1547 Sep 24 j 20:06	0° $\overline{\text{M}}$	
	-1552 Dec 24 j 15:23	0° \approx			-1547 Nov 07 j 17:44	0° $\underline{\text{A}}$	
	-1551 Feb 03 j 02:27	0° H			-1547 Dec 20 j 05:41	0° $\overline{\text{M}}$	
	-1551 Mar 17 j 07:41	0° $\overline{\text{Y}}$		desc. node	-1546 Jan 26 j 04:18	26° $\overline{\text{M}}$ 43'54	
evening set	-1551 Mar 24 j 15:03	5° $\overline{\text{Y}}$ 03'22			-1546 Jan 30 j 15:42	0° $\overline{\text{A}}$	
asc. node	-1551 Apr 08 j 01:53	14° $\overline{\text{Y}}$ 56'37			-1546 Mar 12 j 13:43	0° $\overline{\text{C}}$	
	-1551 Apr 30 j 11:19	0° $\overline{\text{B}}$			-1546 Apr 23 j 04:40	0° \approx	
					-1546 Jun 07 j 14:44	0° H	
conjunction	-1551 May 16 j 13:08	10° $\overline{\text{B}}$ 38'02	0°22'05	retrograde	-1546 Aug 18 j 13:04	26° H 44'52	
minimum elong	-1551 May 16 j 12:12	10° $\overline{\text{B}}$ 36'30	0°22'05	min. Earth dist.	-1546 Sep 16 j 17:33	20° H 54'20	0.48692 AU
max. Earth dist.	-1551 Jun 02 j 15:36	21° $\overline{\text{B}}$ 48'23	2.63020 AU	greatest brilliancy	-1546 Sep 23 j 12:18	18° H 27'07	-2.2m
	-1551 Jun 15 j 07:25	0° $\overline{\text{II}}$		opposition	-1546 Sep 24 j 17:53	18° H 00'15	-3°-10'-52
morning rise	-1551 Jul 04 j 08:16	12° $\overline{\text{II}}$ 12'43		direct	-1546 Oct 28 j 08:29	10° H 53'47	
	-1551 Aug 01 j 08:35	0° $\overline{\text{S}}$		asc. node	-1546 Nov 28 j 21:58	16° H 28'47	
	-1551 Sep 18 j 05:52	0° $\overline{\text{O}}$			-1546 Dec 31 j 22:58	0° $\overline{\text{Y}}$	
	-1551 Nov 06 j 05:08	0° $\overline{\text{M}}$			-1545 Feb 26 j 02:46	0° $\overline{\text{B}}$	
	-1551 Dec 28 j 02:13	0° $\underline{\text{A}}$			-1545 Apr 18 j 02:18	0° $\overline{\text{II}}$	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 36

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1545 Jun 06 j 00:56	0°♊				-1540 Feb 12 j 18:14	0°♊	
evening set	-1545 Jul 23 j 12:56	0°♊14'49		morning rise	-1540 Mar 04 j 14:51	16°♊01'05		
	-1545 Jul 23 j 03:49	0°♊			-1540 Mar 23 j 04:09	0°♋		
max. Earth dist.	-1545 Aug 14 j 08:57	14°♊36'16	2.59252 AU		-1540 May 03 j 10:18	0°♌		
	-1545 Sep 06 j 06:07	0°♋			-1540 Jun 16 j 04:18	0°♍		
				asc. node	-1540 Jul 20 j 19:31	22°♍18'44		
conjunction	-1545 Sep 08 j 15:42	1°♋38'10	0°53'36		-1540 Aug 02 j 06:55	0°♎		
minimum elong	-1545 Sep 08 j 17:05	1°♋40'32	0°53'36		-1540 Sep 24 j 15:54	0°☿		
	-1545 Oct 19 j 07:04	0°♌		retrograde	-1540 Dec 07 j 18:48	23°☿10'55		
morning rise	-1545 Oct 27 j 03:50	5°♌38'00		opposition	-1539 Jan 16 j 05:54	13°☿52'42	4°38'26	
	-1545 Nov 29 j 12:05	0°♍		greatest brilliancy	-1539 Jan 16 j 16:26	13°☿42'18	-1.3m	
desc. node	-1545 Dec 14 j 04:05	10°♍56'42		min. Earth dist.	-1539 Jan 18 j 17:02	12°☿54'18	0.66643 AU	
	-1544 Jan 08 j 08:21	0°♎		direct	-1539 Feb 26 j 12:20	3°☿52'30		
	-1544 Feb 16 j 11:10	0°♏			-1539 May 16 j 22:39	0°♐		
	-1544 Mar 26 j 16:45	0°♐			-1539 Jul 06 j 16:06	0°♑		
	-1544 May 06 j 04:54	0°♋		desc. node	-1539 Aug 04 j 23:59	19°♑35'48		
	-1544 Jun 18 j 20:55	0°♌			-1539 Aug 19 j 19:53	0°♒		
	-1544 Aug 10 j 16:30	0°♍			-1539 Sep 29 j 13:33	0°♓		
retrograde	-1544 Sep 29 j 05:56	13°♍15'23			-1539 Nov 07 j 09:35	0°♎		
asc. node	-1544 Oct 15 j 20:31	11°♍18'03		greatest brilliancy	-1539 Nov 21 j 04:19	10°♎49'42	1.2m	
min. Earth dist.	-1544 Nov 02 j 17:38	5°♍23'56	0.60305 AU		-1539 Dec 15 j 12:02	0°♏		
opposition	-1544 Nov 07 j 21:08	3°♍21'22	0°57'50	evening set	-1539 Dec 30 j 19:15	12°♏01'29		
greatest brilliancy	-1544 Nov 07 j 14:08	3°♍28'18	-1.6m		-1538 Jan 22 j 21:32	0°♐		
	-1544 Nov 16 j 16:29	30°♎♑			-1538 Mar 03 j 11:10	0°♋		
direct	-1544 Dec 15 j 09:39	24°♑37'53						
	-1543 Jan 16 j 02:50	0°♌		conjunction	-1538 Mar 06 j 02:17	1°♋57'01	0°-51'-18	
	-1543 Mar 24 j 04:47	0°♎		minimum elong	-1538 Mar 06 j 04:55	2°♋01'53	0°51'18	
	-1543 May 15 j 21:13	0°☿			-1538 Apr 13 j 20:27	0°♌		
	-1543 Jul 03 j 06:58	0°♊		max. Earth dist.	-1538 Apr 19 j 15:47	4°♌05'23	2.48711 AU	
	-1543 Aug 17 j 15:14	0°♋		morning rise	-1538 May 05 j 22:15	15°♌23'41		
evening set	-1543 Sep 02 j 06:56	10°♋47'37			-1538 May 27 j 10:09	0°♍		
max. Earth dist.	-1543 Sep 17 j 01:57	21°♋12'17	2.48149 AU	asc. node	-1538 Jun 07 j 18:31	7°♍33'45		
	-1543 Sep 29 j 08:44	0°♌			-1538 Jul 12 j 07:48	0°♎		
					-1538 Aug 29 j 21:10	0°☿		
conjunction	-1543 Oct 24 j 10:26	18°♌22'07	0°04'29		-1538 Oct 22 j 02:14	0°♊		
minimum elong	-1543 Oct 24 j 10:41	18°♌22'33	0°04'28	retrograde	-1537 Jan 15 j 16:27	28°♊33'32		
behind sun begin	-1543 Oct 23 j 12:10	17°♌40'46		opposition	-1537 Feb 22 j 07:39	20°♊11'36	4°25'21	
behind sun end	-1543 Oct 25 j 09:12	19°♌04'23		greatest brilliancy	-1537 Feb 23 j 14:35	19°♊42'13	-1.5m	
desc. node	-1543 Oct 31 j 02:23	23°♌20'21		min. Earth dist.	-1537 Feb 28 j 13:39	17°♊49'21	0.60122 AU	
	-1543 Nov 08 j 23:00	0°♍		direct	-1537 Apr 04 j 04:44	10°♊22'42		
	-1543 Dec 18 j 01:39	0°♎			-1537 Jun 07 j 01:30	0°♋		
morning rise	-1543 Dec 21 j 16:54	2°♎49'34		desc. node	-1537 Jun 22 j 22:31	8°♋41'29		
	-1542 Jan 25 j 11:13	0°♏			-1537 Jul 27 j 00:51	0°♌		
	-1542 Mar 05 j 00:06	0°♐			-1537 Sep 07 j 12:58	0°♍		
	-1542 Apr 13 j 14:21	0°♋			-1537 Oct 17 j 03:47	0°♎		
	-1542 May 25 j 05:52	0°♌			-1537 Nov 24 j 18:41	0°♏		
	-1542 Jul 09 j 07:55	0°♍			-1536 Jan 02 j 15:52	0°♐		
	-1542 Aug 30 j 17:47	0°♎			-1536 Feb 11 j 17:49	0°♋		
asc. node	-1542 Sep 02 j 19:33	1°♎30'44		evening set	-1536 Mar 04 j 01:06	15°♋26'19		
retrograde	-1542 Nov 03 j 23:11	19°♎40'37			-1536 Mar 24 j 14:55	0°♌		
min. Earth dist.	-1542 Dec 12 j 16:41	10°♎23'51	0.66658 AU	asc. node	-1536 Apr 24 j 17:13	21°♌23'33		
opposition	-1542 Dec 14 j 02:17	9°♎50'08	3°27'18					
greatest brilliancy	-1542 Dec 13 j 19:07	9°♎57'20	-1.3m	conjunction	-1536 Apr 29 j 00:15	24°♌17'34	0°02'35	
direct	-1541 Jan 23 j 03:14	0°♎13'50		minimum elong	-1536 Apr 29 j 00:07	24°♌17'20	0°02'36	
	-1541 Apr 21 j 10:11	0°☿		behind sun begin	-1536 Apr 28 j 02:12	23°♌40'24		
	-1541 Jun 12 j 17:38	0°♊		behind sun end	-1536 Apr 29 j 22:02	24°♌54'15		
	-1541 Jul 29 j 05:48	0°♋			-1536 May 07 j 12:18	0°♍		
	-1541 Sep 10 j 04:11	0°♌		max. Earth dist.	-1536 May 23 j 02:18	10°♍20'47	2.59956 AU	
desc. node	-1541 Sep 18 j 00:53	5°♌42'56		morning rise	-1536 Jun 19 j 04:17	28°♍00'59		
	-1541 Oct 20 j 13:41	0°♍			-1536 Jun 22 j 06:03	0°♎		
evening set	-1541 Oct 24 j 17:44	3°♍10'41			-1536 Aug 08 j 11:42	0°☿		
	-1541 Nov 28 j 08:26	0°♎			-1536 Sep 26 j 02:50	0°♊		
					-1536 Nov 16 j 03:54	0°♋		
conjunction	-1541 Dec 26 j 08:34	22°♎02'46	0°-57'-14		-1535 Jan 14 j 18:16	0°♌		
minimum elong	-1541 Dec 26 j 05:52	21°♎57'27	0°57'15	retrograde	-1535 Mar 06 j 07:57	12°♌10'53		
max. Earth dist.	-1541 Dec 25 j 21:06	21°♎40'09	2.37360 AU	opposition	-1535 Apr 09 j 11:30	5°♌24'27	1°40'39	
	-1540 Jan 05 j 10:36	0°♏		greatest brilliancy	-1535 Apr 10 j 08:39	5°♌06'28	-2.2m	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 37

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

min. Earth dist.	-1535 Apr 17 j 22:33	2°♄32'30	0.48091 AU	evening set	-1530 Jul 08 j 15:20	16°♄11'40	
	-1535 Apr 26 j 09:21	30°♈♊			-1530 Jul 30 j 00:37	0°♈	
desc. node	-1535 May 09 j 21:01	27°♊27'54		max. Earth dist.	-1530 Aug 03 j 21:52	3°♈11'11	2.62428 AU
direct	-1535 May 17 j 02:01	27°♊05'57					
	-1535 Jun 07 j 05:11	0°♊		conjunction	-1530 Aug 23 j 23:36	16°♈25'24	1°03'45
	-1535 Aug 07 j 20:33	0°♊		minimum elong	-1530 Aug 24 j 00:34	16°♈27'02	1°03'47
	-1535 Sep 20 j 14:26	0°♊			-1530 Sep 13 j 04:42	0°♊	
	-1535 Oct 31 j 07:48	0°♊		morning rise	-1530 Oct 09 j 13:46	18°♊07'09	
	-1535 Dec 10 j 17:20	0°♊			-1530 Oct 26 j 12:15	0°♊	
	-1534 Jan 21 j 01:33	0°♊			-1530 Dec 07 j 03:16	0°♊	
	-1534 Mar 05 j 00:01	0°♊		desc. node	-1530 Dec 30 j 20:19	17°♊32'43	
asc. node	-1534 Mar 12 j 16:07	5°♊14'00			-1529 Jan 16 j 11:05	0°♊	
	-1534 Apr 18 j 16:21	0°♊			-1529 Feb 25 j 02:04	0°♊	
evening set	-1534 Apr 22 j 03:37	2°♊17'05			-1529 Apr 05 j 21:13	0°♊	
	-1534 Jun 03 j 19:17	0°♊			-1529 May 17 j 06:55	0°♊	
					-1529 Jul 02 j 10:22	0°♊	
conjunction	-1534 Jun 10 j 14:27	4°♊21'59	0°46'57	retrograde	-1529 Sep 14 j 21:53	27°♊04'22	
minimum elong	-1534 Jun 10 j 13:07	4°♊19'50	0°46'58	min. Earth dist.	-1529 Oct 17 j 09:39	19°♊55'55	0.56214 AU
max. Earth dist.	-1534 Jun 17 j 19:59	8°♊59'54	2.66184 AU	opposition	-1529 Oct 23 j 21:28	17°♊24'25	0°-26'00
	-1534 Jul 20 j 18:19	0°♊		greatest brilliancy	-1529 Oct 23 j 17:46	17°♊28'01	-1.8m
morning rise	-1534 Jul 26 j 21:31	3°♊54'06		asc. node	-1529 Nov 02 j 12:45	13°♊51'17	
	-1534 Sep 05 j 22:41	0°♊		direct	-1529 Nov 29 j 01:30	9°♊12'22	
	-1534 Oct 23 j 01:50	0°♊			-1528 Feb 06 j 12:29	0°♊	
	-1534 Dec 09 j 09:57	0°♊			-1528 Apr 02 j 23:32	0°♊	
	-1533 Jan 27 j 01:14	0°♊			-1528 May 23 j 17:09	0°♊	
	-1533 Mar 22 j 08:26	0°♊			-1528 Jul 10 j 11:33	0°♊	
desc. node	-1533 Mar 27 j 21:58	2°♊36'26		evening set	-1528 Aug 16 j 06:06	24°♊16'53	
retrograde	-1533 May 19 j 02:02	16°♊34'21			-1528 Aug 24 j 16:14	0°♊	
opposition	-1533 Jun 18 j 09:41	11°♊34'29	-5°-16'-47	max. Earth dist.	-1528 Sep 01 j 16:44	5°♊30'05	2.52918 AU
greatest brilliancy	-1533 Jun 18 j 18:25	11°♊28'38	-2.9m				
min. Earth dist.	-1533 Jun 20 j 03:32	11°♊06'28	0.37802 AU	conjunction	-1528 Oct 04 j 19:25	28°♊47'41	0°27'18
direct	-1533 Jul 19 j 00:14	6°♊23'25		minimum elong	-1528 Oct 04 j 20:39	28°♊49'53	0°27'17
	-1533 Sep 25 j 02:35	0°♊			-1528 Oct 06 j 11:42	0°♊	
	-1533 Nov 12 j 17:46	0°♊		desc. node	-1528 Nov 16 j 19:04	0°♊23'08	
	-1533 Dec 28 j 06:02	0°♊			-1528 Nov 16 j 06:45	0°♊	
asc. node	-1532 Jan 28 j 13:56	20°♊41'03		morning rise	-1528 Nov 27 j 07:09	8°♊18'42	
	-1532 Feb 11 j 19:10	0°♊			-1528 Dec 25 j 15:02	0°♊	
	-1532 Mar 29 j 03:55	0°♊			-1527 Feb 02 j 05:55	0°♊	
	-1532 May 15 j 06:21	0°♊			-1527 Mar 12 j 23:26	0°♊	
evening set	-1532 May 31 j 19:01	10°♊28'37			-1527 Apr 21 j 18:47	0°♊	
	-1532 Jul 01 j 12:53	0°♊			-1527 Jun 02 j 20:42	0°♊	
max. Earth dist.	-1532 Jul 10 j 05:50	5°♊33'03	2.66995 AU		-1527 Jul 19 j 07:19	0°♊	
					-1527 Sep 18 j 00:25	0°♊	
conjunction	-1532 Jul 17 j 06:38	10°♊02'42	1°08'46	asc. node	-1527 Sep 19 j 12:09	0°♊30'06	
minimum elong	-1532 Jul 17 j 06:07	10°♊01'53	1°08'47	retrograde	-1527 Oct 21 j 11:26	6°♊19'08	
	-1532 Aug 17 j 06:40	0°♊			-1527 Nov 21 j 08:32	30°♊♈	
morning rise	-1532 Aug 31 j 01:45	8°♊58'22		min. Earth dist.	-1527 Nov 27 j 15:56	27°♊32'21	0.64894 AU
	-1532 Oct 01 j 23:40	0°♊		opposition	-1527 Nov 30 j 13:15	26°♊22'46	2°39'31
	-1532 Nov 15 j 11:40	0°♊		greatest brilliancy	-1527 Nov 30 j 02:53	26°♊33'11	-1.4m
	-1532 Dec 28 j 21:08	0°♊		direct	-1526 Jan 08 j 17:41	17°♊03'26	
	-1531 Feb 09 j 11:54	0°♊			-1526 Mar 02 j 15:19	0°♊	
desc. node	-1531 Feb 11 j 21:53	1°♊42'30			-1526 May 01 j 12:54	0°♊	
	-1531 Mar 24 j 01:50	0°♊			-1526 Jun 20 j 18:30	0°♊	
	-1531 May 07 j 18:21	0°♊			-1526 Aug 05 j 16:37	0°♊	
	-1531 Jul 06 j 23:32	0°♊			-1526 Sep 17 j 11:55	0°♊	
retrograde	-1531 Jul 28 j 20:30	3°♊16'51		evening set	-1526 Oct 02 j 10:52	10°♊55'19	
	-1531 Aug 19 j 13:00	30°♊♈		desc. node	-1526 Oct 04 j 18:01	12°♊37'08	
min. Earth dist.	-1531 Aug 25 j 04:11	28°♊16'55	0.43627 AU	max. Earth dist.	-1526 Oct 24 j 11:39	27°♊22'54	2.40470 AU
greatest brilliancy	-1531 Aug 31 j 06:46	26°♊15'30	-2.5m		-1526 Oct 27 j 22:34	0°♊	
opposition	-1531 Sep 02 j 01:28	25°♊39'54	-5°-7'-30				
direct	-1531 Oct 03 j 18:36	19°♊27'11		conjunction	-1526 Nov 29 j 12:56	25°♊06'04	0°-36'-9
	-1531 Nov 17 j 09:47	0°♊		minimum elong	-1526 Nov 29 j 10:31	25°♊01'22	0°36'09
asc. node	-1531 Dec 15 j 12:40	13°♊09'14			-1526 Dec 05 j 19:34	0°♊	
	-1530 Jan 15 j 11:42	0°♊			-1525 Jan 12 j 23:40	0°♊	
	-1530 Mar 07 j 12:54	0°♊		morning rise	-1525 Feb 04 j 04:16	17°♊25'16	
	-1530 Apr 25 j 20:35	0°♊			-1525 Feb 20 j 08:12	0°♊	
	-1530 Jun 13 j 02:57	0°♊			-1525 Mar 31 j 18:11	0°♊	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 38

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1525 May 12 j 01:29	0°♄					-1520 Jul 05 j 06:27	0°♅	
	-1525 Jun 25 j 02:09	0°♅					-1520 Aug 21 j 03:16	0°♆	
asc. node	-1525 Aug 07 j 10:34	27°♄08'02					-1520 Oct 01 j 07:29	0°♄	
	-1525 Aug 12 j 07:30	0°♆					-1520 Nov 09 j 19:42	0°♅	
	-1525 Oct 10 j 13:21	0°♆					-1520 Dec 19 j 09:24	0°♆	
retrograde	-1525 Nov 25 j 01:45	10°♆22'17					-1519 Jan 29 j 01:45	0°♄	
opposition	-1524 Jan 03 j 22:01	0°♆48'57	4°19'38				-1519 Mar 12 j 11:29	0°♄	
greatest brilliancy	-1524 Jan 04 j 00:33	0°♆46'26	-1.2m		asc. node		-1519 Mar 29 j 06:51	11°♄32'01	
min. Earth dist.	-1524 Jan 04 j 20:49	0°♆26'15	0.67425 AU		evening set		-1519 Apr 04 j 11:39	15°♄44'21	
	-1524 Jan 05 j 23:10	30°♄					-1519 Apr 25 j 18:18	0°♅	
direct	-1524 Feb 13 j 20:35	20°♄54'51							
	-1524 Mar 27 j 16:40	0°♆			conjunction		-1519 May 25 j 23:43	19°♄51'10	0°32'10
	-1524 May 27 j 19:54	0°♄			minimum elong		-1519 May 25 j 22:32	19°♄49'14	0°32'10
	-1524 Jul 15 j 05:17	0°♄			max. Earth dist.		-1519 Jun 08 j 10:06	28°♄33'07	2.64391 AU
desc. node	-1524 Aug 21 j 16:20	25°♄40'51					-1519 Jun 10 j 15:59	0°♄	
	-1524 Aug 27 j 17:34	0°♅			morning rise		-1519 Jul 12 j 17:17	20°♄31'19	
	-1524 Oct 07 j 06:35	0°♆					-1519 Jul 27 j 15:27	0°♆	
	-1524 Nov 15 j 01:09	0°♄					-1519 Sep 13 j 05:16	0°♄	
evening set	-1524 Dec 03 j 00:29	14°♄08'36					-1519 Oct 31 j 09:11	0°♄	
	-1524 Dec 23 j 02:39	0°♅					-1519 Dec 20 j 02:01	0°♅	
	-1523 Jan 30 j 10:28	0°♆					-1518 Feb 13 j 11:23	0°♆	
					desc. node		-1518 Apr 13 j 13:52	18°♄04'13	
conjunction	-1523 Feb 07 j 16:55	6°♆22'50	-1°-4'-12		retrograde		-1518 Apr 17 j 07:11	18°♄09'16	
minimum elong	-1523 Feb 07 j 18:24	6°♆25'39	1°04'14		opposition		-1518 May 18 j 16:24	12°♄40'25	-2°-17'-30
	-1523 Mar 10 j 21:21	0°♄			greatest brilliancy		-1518 May 19 j 09:49	12°♄27'46	-2.7m
max. Earth dist.	-1523 Mar 30 j 00:10	14°♄05'08	2.43390 AU		min. Earth dist.		-1518 May 24 j 23:36	10°♄50'53	0.40591 AU
morning rise	-1523 Apr 14 j 05:51	25°♄04'49			direct		-1518 Jun 21 j 00:59	6°♄21'01	
	-1523 Apr 21 j 03:48	0°♄					-1518 Aug 26 j 23:48	0°♄	
	-1523 Jun 03 j 16:41	0°♅					-1518 Oct 12 j 15:45	0°♅	
asc. node	-1523 Jun 24 j 10:19	13°♄42'13					-1518 Nov 24 j 20:09	0°♆	
	-1523 Jul 19 j 20:34	0°♆					-1517 Jan 06 j 22:40	0°♄	
	-1523 Sep 07 j 12:23	0°♆			asc. node		-1517 Feb 14 j 05:47	26°♄04'02	
	-1523 Nov 04 j 15:12	0°♄					-1517 Feb 20 j 02:37	0°♄	
retrograde	-1523 Dec 30 j 16:20	14°♄25'24					-1517 Apr 06 j 15:03	0°♅	
opposition	-1522 Feb 07 j 04:34	5°♄37'55	4°42'35		evening set		-1517 May 17 j 14:41	26°♄23'55	
greatest brilliancy	-1522 Feb 08 j 04:21	5°♄14'51	-1.4m				-1517 May 23 j 05:55	0°♄	
min. Earth dist.	-1522 Feb 12 j 00:06	3°♄46'02	0.63438 AU		max. Earth dist.		-1517 Jul 02 j 03:58	25°♄26'14	2.67322 AU
	-1522 Feb 22 j 11:26	30°♄							
direct	-1522 Mar 20 j 11:05	25°♄38'36			conjunction		-1517 Jul 03 j 22:04	26°♄33'15	1°03'18
	-1522 Apr 17 j 06:16	0°♄			minimum elong		-1517 Jul 03 j 21:05	26°♄31'41	1°03'19
	-1522 Jun 20 j 07:59	0°♄					-1517 Jul 09 j 07:53	0°♆	
desc. node	-1522 Jul 09 j 15:28	11°♄54'21			morning rise		-1517 Aug 17 j 22:34	25°♄20'45	
	-1522 Aug 05 j 18:46	0°♅					-1517 Aug 25 j 04:01	0°♄	
	-1522 Sep 16 j 07:10	0°♆					-1517 Oct 10 j 07:04	0°♄	
	-1522 Oct 25 j 11:24	0°♄					-1517 Nov 24 j 14:12	0°♅	
	-1522 Dec 02 j 19:20	0°♅					-1516 Jan 08 j 06:35	0°♆	
	-1521 Jan 10 j 10:15	0°♆					-1516 Feb 21 j 21:15	0°♄	
evening set	-1521 Feb 09 j 23:41	23°♄08'07			desc. node		-1516 Feb 29 j 13:39	5°♄06'50	
	-1521 Feb 19 j 05:44	0°♄					-1516 Apr 08 j 01:58	0°♅	
	-1521 Apr 01 j 20:44	0°♄					-1516 Jun 05 j 02:02	0°♆	
					retrograde		-1516 Jul 04 j 09:53	5°♆29'55	
conjunction	-1521 Apr 10 j 14:55	6°♄07'49	0°-18'-54		min. Earth dist.		-1516 Jul 31 j 03:10	1°♆01'16	0.39518 AU
minimum elong	-1521 Apr 10 j 16:00	6°♄09'43	0°18'54				-1516 Aug 03 j 15:12	30°♄	
max. Earth dist.	-1521 May 12 j 08:29	27°♄50'44	2.56094 AU		greatest brilliancy		-1516 Aug 04 j 09:54	29°♄46'12	-2.7m
asc. node	-1521 May 12 j 09:11	27°♄51'55			opposition		-1516 Aug 05 j 23:24	29°♄18'34	-6°-36'-7
	-1521 May 15 j 13:27	0°♅			direct		-1516 Sep 05 j 04:15	23°♄58'22	
morning rise	-1521 Jun 03 j 22:05	12°♄51'34					-1516 Oct 07 j 05:16	0°♆	
	-1521 Jun 30 j 06:29	0°♆					-1516 Dec 07 j 13:28	0°♄	
	-1521 Aug 16 j 19:46	0°♆			asc. node		-1515 Jan 01 j 05:12	14°♄32'38	
	-1521 Oct 05 j 13:58	0°♄					-1515 Jan 26 j 14:34	0°♄	
	-1521 Nov 29 j 08:31	0°♄					-1515 Mar 16 j 02:19	0°♅	
retrograde	-1520 Feb 13 j 11:03	23°♄44'30					-1515 May 03 j 07:15	0°♄	
opposition	-1520 Mar 20 j 04:40	16°♄14'26	3°11'29				-1515 Jun 20 j 01:43	0°♆	
greatest brilliancy	-1520 Mar 21 j 13:51	15°♄44'30	-1.9m		evening set		-1515 Jun 23 j 23:21	2°♄28'21	
min. Earth dist.	-1520 Mar 28 j 05:35	13°♄20'53	0.53274 AU		max. Earth dist.		-1515 Jul 25 j 03:13	22°♄24'15	2.64841 AU
direct	-1520 Apr 28 j 14:04	7°♄05'37					-1515 Aug 05 j 20:29	0°♄	
desc. node	-1520 May 26 j 14:54	11°♄53'16							

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 39

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

conjunction	-1515 Aug 09 j 01:00	2°04'34	1°09'10		-1510 Jul 03 j 12:22	0°8	
minimum elong	-1515 Aug 09 j 01:24	2°05'14	1°09'11		-1510 Aug 22 j 17:55	0°II	
	-1515 Sep 20 j 04:19	0°൬		asc. node	-1510 Aug 24 j 02:36	0°II44'06	
morning rise	-1515 Sep 23 j 11:32	2°൬13'42		retrograde	-1510 Nov 11 j 15:53	27°II33'38	
	-1515 Nov 02 j 20:48	0°𑍑		opposition	-1510 Dec 21 j 17:14	17°II48'22	3°49'44
	-1515 Dec 15 j 00:49	0°𑍒		min. Earth dist.	-1510 Dec 21 j 03:44	18°II01'54	0.67216 AU
desc. node	-1514 Jan 16 j 13:12	23°𑍒45'14		greatest brilliancy	-1510 Dec 21 j 12:59	17°II52'38	-1.3m
	-1514 Jan 25 j 00:05	0°𑍓		direct	-1509 Jan 31 j 02:51	8°II04'38	
	-1514 Mar 06 j 08:27	0°𑍔			-1509 Apr 13 j 17:40	0°𑍕	
	-1514 Apr 16 j 02:01	0°𑍕			-1509 Jun 07 j 03:23	0°𑍖	
	-1514 May 29 j 07:17	0°𑍖			-1509 Jul 24 j 05:43	0°൬	
	-1514 Jul 22 j 03:47	0°𑍗			-1509 Sep 05 j 08:55	0°𑍘	
retrograde	-1514 Aug 29 j 02:14	8°𑍗49'02		desc. node	-1509 Sep 08 j 10:09	2°𑍘12'16	
min. Earth dist.	-1514 Sep 28 j 10:36	2°𑍙29'35	0.51485 AU		-1509 Oct 15 j 19:49	0°𑍒	
greatest brilliancy	-1514 Oct 05 j 05:55	29°𑍙56'57	-2.0m	evening set	-1509 Nov 07 j 12:35	17°𑍒27'14	
	-1514 Oct 05 j 02:40	30°𑍚𑍙			-1509 Nov 23 j 14:17	0°𑍓	
opposition	-1514 Oct 06 j 01:27	29°𑍚38'37	-2°-6'-27		-1509 Dec 31 j 15:42	0°𑍔	
direct	-1514 Nov 09 j 16:06	22°𑍚06'02					
asc. node	-1514 Nov 19 j 04:02	22°𑍚40'13		conjunction	-1508 Jan 11 j 08:53	8°𑍔26'40	-1°-4'-4
	-1514 Dec 18 j 05:31	0°𑍙		minimum elong	-1508 Jan 11 j 07:22	8°𑍔23'41	1°04'05
	-1513 Feb 19 j 06:30	0°8			-1508 Feb 07 j 22:39	0°𑍕	
	-1513 Apr 12 j 16:29	0°II		max. Earth dist.	-1508 Feb 20 j 00:42	9°𑍕19'29	2.38506 AU
	-1513 Jun 01 j 04:10	0°𑍕			-1508 Mar 18 j 07:50	0°𑍖	
	-1513 Jul 18 j 12:08	0°𑍖		morning rise	-1508 Mar 20 j 07:04	1°𑍖28'04	
evening set	-1513 Aug 01 j 07:59	9°𑍖01'58			-1508 Apr 28 j 12:48	0°𑍗	
max. Earth dist.	-1513 Aug 21 j 01:29	22°𑍖09'34	2.57169 AU		-1508 Jun 11 j 03:13	0°8	
	-1513 Sep 01 j 15:29	0°൬		asc. node	-1508 Jul 11 j 00:53	19°830'04	
					-1508 Jul 27 j 18:19	0°II	
conjunction	-1513 Sep 18 j 03:09	11°൬20'23	0°45'24		-1508 Sep 17 j 06:33	0°𑍕	
minimum elong	-1513 Sep 18 j 04:38	11°൬22'56	0°45'24		-1508 Dec 02 j 06:30	0°𑍖	
	-1513 Oct 14 j 14:41	0°𑍘		retrograde	-1508 Dec 15 j 22:03	1°𑍖05'24	
morning rise	-1513 Nov 07 j 02:17	17°𑍘00'12			-1508 Dec 28 j 23:23	30°𑍚𑍕	
	-1513 Nov 24 j 16:25	0°𑍒		opposition	-1507 Jan 24 j 02:01	21°𑍕57'10	4°43'40
desc. node	-1513 Dec 04 j 11:25	7°𑍒19'33		greatest brilliancy	-1507 Jan 24 j 17:20	21°𑍕42'08	-1.3m
	-1512 Jan 03 j 08:21	0°𑍓		min. Earth dist.	-1507 Jan 27 j 09:22	20°𑍕39'13	0.65788 AU
	-1512 Feb 11 j 06:33	0°𑍔		direct	-1507 Mar 06 j 09:57	11°𑍕55'41	
	-1512 Mar 21 j 06:57	0°𑍕			-1507 May 08 j 09:35	0°𑍖	
	-1512 Apr 30 j 10:47	0°𑍖			-1507 Jun 30 j 17:16	0°൬	
	-1512 Jun 12 j 07:19	0°𑍗		desc. node	-1507 Jul 26 j 08:41	16°൬44'45	
	-1512 Jul 31 j 12:50	0°8			-1507 Aug 14 j 12:59	0°𑍘	
asc. node	-1512 Oct 06 j 03:17	22°812'34			-1507 Sep 24 j 12:50	0°𑍒	
retrograde	-1512 Oct 07 j 13:22	22°813'23			-1507 Nov 02 j 11:29	0°𑍓	
min. Earth dist.	-1512 Nov 12 j 01:12	14°800'43	0.62182 AU		-1507 Dec 10 j 15:23	0°𑍔	
opposition	-1512 Nov 16 j 09:32	12°816'28	1°39'16	evening set	-1506 Jan 15 j 04:20	27°𑍔45'28	
greatest brilliancy	-1512 Nov 15 j 23:41	12°826'19	-1.5m		-1506 Jan 18 j 02:02	0°𑍕	
direct	-1512 Dec 24 j 13:13	3°818'43			-1506 Feb 26 j 16:33	0°𑍖	
	-1511 Mar 16 j 22:01	0°II					
	-1511 May 10 j 10:02	0°𑍕		conjunction	-1506 Mar 19 j 17:35	15°𑍖25'37	0°-40'-23
	-1511 Jun 28 j 09:24	0°𑍖		minimum elong	-1506 Mar 19 j 19:55	15°𑍖29'50	0°40'23
	-1511 Aug 12 j 22:34	0°൬			-1506 Apr 09 j 02:29	0°𑍗	
evening set	-1511 Sep 12 j 16:14	21°൬23'07		max. Earth dist.	-1506 Apr 28 j 20:10	13°𑍗47'03	2.51478 AU
	-1511 Sep 24 j 16:49	0°𑍘		morning rise	-1506 May 17 j 01:22	26°𑍗13'30	
max. Earth dist.	-1511 Sep 27 j 23:15	2°𑍘21'51	2.45335 AU		-1506 May 22 j 15:48	0°8	
desc. node	-1511 Oct 21 j 10:21	19°𑍘37'22		asc. node	-1506 May 29 j 00:27	4°815'29	
	-1511 Nov 04 j 05:57	0°𑍒			-1506 Jul 07 j 10:05	0°II	
					-1506 Aug 24 j 11:47	0°𑍕	
conjunction	-1511 Nov 05 j 17:00	1°𑍒06'20	0°-10'-14		-1506 Oct 15 j 00:53	0°𑍖	
minimum elong	-1511 Nov 05 j 16:21	1°𑍒05'05	0°10'16		-1506 Dec 17 j 18:55	0°൬	
behind sun begin	-1511 Nov 04 j 21:11	0°𑍒28'50		retrograde	-1505 Jan 25 j 13:04	7°൬34'05	
behind sun end	-1511 Nov 06 j 11:30	1°𑍒41'22			-1505 Mar 02 j 03:56	30°𑍚𑍖	
	-1511 Dec 13 j 06:28	0°𑍓		opposition	-1505 Mar 03 j 13:31	29°𑍖28'46	4°05'45
morning rise	-1510 Jan 06 j 02:08	18°𑍓37'49		greatest brilliancy	-1505 Mar 04 j 22:59	28°𑍖57'27	-1.6m
greatest brilliancy	-1510 Jan 11 j 03:05	22°𑍓35'09	1.2m	min. Earth dist.	-1505 Mar 10 j 12:52	26°𑍖52'22	0.57897 AU
	-1510 Jan 20 j 13:48	0°𑍔		direct	-1505 Apr 13 j 01:04	19°𑍖50'05	
	-1510 Feb 28 j 00:41	0°𑍕			-1505 May 26 j 05:12	0°൬	
	-1510 Apr 08 j 12:28	0°𑍖		desc. node	-1505 Jun 13 j 06:44	8°൬28'37	
	-1510 May 19 j 23:20	0°𑍗			-1505 Jul 20 j 02:02	0°𑍘	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 40

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1505 Sep 01 j 15:03	0°♄	conjunction	-1500 Jul 25 j 12:16	18°♄15'46	1°10'08
	-1505 Oct 11 j 15:59	0°♂	minimum elong	-1500 Jul 25 j 12:05	18°♄15'28	1°10'09
	-1505 Nov 19 j 12:45	0°♂		-1500 Aug 12 j 16:21	0°♂	
	-1505 Dec 28 j 14:30	0°♂	morning rise	-1500 Sep 08 j 09:31	17°♂29'01	
	-1504 Feb 06 j 20:11	0°♂		-1500 Sep 27 j 05:46	0°♂	
evening set	-1504 Mar 16 j 00:11	27°♂18'48		-1500 Nov 10 j 10:00	0°♂	
	-1504 Mar 19 j 20:25	0°♂		-1500 Dec 23 j 07:23	0°♄	
asc. node	-1504 Apr 14 j 23:52	17°♂59'34	desc. node	-1499 Feb 02 j 05:21	29°♄17'16	
	-1504 May 02 j 19:51	0°♂		-1499 Feb 03 j 05:02	0°♂	
				-1499 Mar 16 j 17:50	0°♂	
conjunction	-1504 May 09 j 05:07	4°♂15'12 0°14'09		-1499 Apr 28 j 07:58	0°♂	
minimum elong	-1504 May 09 j 04:28	4°♂14'07 0°14'10		-1499 Jun 15 j 15:07	0°♂	
behind sun begin	-1504 May 08 j 18:55	3°♂58'16	retrograde	-1499 Aug 09 j 23:45	17°♂28'12	
behind sun end	-1504 May 09 j 14:01	4°♂29'57	min. Earth dist.	-1499 Sep 07 j 05:45	12°♂01'23	0.46392 AU
max. Earth dist.	-1504 May 29 j 07:02	17°♂28'49 2.61745 AU	greatest brilliancy	-1499 Sep 13 j 20:43	9°♂42'39	-2.3m
	-1504 Jun 17 j 13:46	0°♄	opposition	-1499 Sep 15 j 09:08	9°♂10'43	-4°-1'-28
morning rise	-1504 Jun 27 j 23:33	6°♄41'44	direct	-1499 Oct 18 j 04:08	2°♂27'22	
	-1504 Aug 03 j 15:49	0°♄	asc. node	-1499 Dec 05 j 20:03	14°♂32'08	
	-1504 Sep 20 j 19:37	0°♂		-1498 Jan 07 j 01:26	0°♂	
	-1504 Nov 09 j 12:57	0°♂		-1498 Mar 01 j 13:15	0°♂	
	-1503 Jan 02 j 17:37	0°♄		-1498 Apr 20 j 17:51	0°♄	
retrograde	-1503 Mar 20 j 03:52	24°♄20'17		-1498 Jun 08 j 09:18	0°♄	
opposition	-1503 Apr 22 j 09:41	18°♄00'53 0°28'03	evening set	-1498 Jul 17 j 02:30	24°♄35'57	
greatest brilliancy	-1503 Apr 22 j 16:00	17°♄55'46 -2.4m		-1498 Jul 25 j 10:36	0°♂	
desc. node	-1503 Apr 30 j 06:27	15°♄28'23	max. Earth dist.	-1498 Aug 09 j 22:24	10°♂08'27	2.60775 AU
min. Earth dist.	-1503 Apr 30 j 15:25	15°♄21'22 0.45221 AU				
direct	-1503 May 28 j 15:55	10°♄20'06	conjunction	-1498 Sep 01 j 19:22	25°♂23'40	0°58'29
	-1503 Jul 27 j 18:31	0°♄	minimum elong	-1498 Sep 01 j 20:36	25°♂25'44	0°58'29
	-1503 Sep 12 j 22:39	0°♂		-1498 Sep 08 j 14:44	0°♂	
	-1503 Oct 24 j 20:22	0°♂	morning rise	-1498 Oct 19 j 08:22	28°♂15'16	
	-1503 Dec 04 j 22:03	0°♂		-1498 Oct 21 j 19:26	0°♄	
	-1502 Jan 15 j 17:17	0°♂		-1498 Dec 02 j 05:32	0°♄	
	-1502 Feb 27 j 23:46	0°♂	desc. node	-1498 Dec 21 j 05:14	14°♄07'02	
asc. node	-1502 Mar 02 j 21:47	1°♂58'52		-1497 Jan 11 j 07:04	0°♂	
	-1502 Apr 13 j 21:42	0°♂		-1497 Feb 19 j 14:48	0°♂	
evening set	-1502 May 01 j 16:15	11°♂36'35		-1497 Mar 31 j 01:15	0°♂	
	-1502 May 30 j 03:53	0°♄		-1497 May 10 j 19:54	0°♂	
				-1497 Jun 24 j 05:09	0°♂	
conjunction	-1502 Jun 19 j 05:40	12°♄51'06 0°54'00		-1497 Aug 20 j 15:47	0°♂	
minimum elong	-1502 Jun 19 j 04:24	12°♄49'05 0°54'01	retrograde	-1497 Sep 23 j 20:51	6°♂57'55	
max. Earth dist.	-1502 Jun 23 j 04:34	15°♄22'32 2.66816 AU	asc. node	-1497 Oct 23 j 18:34	0°♂49'28	
	-1502 Jul 16 j 03:08	0°♄		-1497 Oct 25 j 22:54	30°♂♂	
morning rise	-1502 Aug 03 j 22:47	11°♄59'22	min. Earth dist.	-1497 Oct 27 j 11:42	29°♂24'25	0.58582 AU
	-1502 Sep 01 j 03:49	0°♂	opposition	-1497 Nov 02 j 05:32	27°♂08'29	0°24'36
	-1502 Oct 17 j 20:50	0°♂	greatest brilliancy	-1497 Nov 02 j 02:05	27°♂11'54	-1.7m
	-1502 Dec 03 j 07:41	0°♄	direct	-1497 Dec 09 j 03:44	18°♂38'01	
	-1501 Jan 19 j 02:16	0°♄		-1496 Jan 26 j 14:32	0°♂	
	-1501 Mar 08 j 21:11	0°♂		-1496 Mar 27 j 18:07	0°♄	
desc. node	-1501 Mar 18 j 06:18	5°♂24'19		-1496 May 18 j 13:23	0°♄	
	-1501 May 10 j 02:54	0°♂		-1496 Jul 05 j 17:16	0°♂	
retrograde	-1501 Jun 06 j 02:07	4°♂25'04		-1496 Aug 20 j 01:16	0°♂	
	-1501 Jul 03 j 22:55	30°♂♂	evening set	-1496 Aug 25 j 18:33	3°♂54'49	
min. Earth dist.	-1501 Jul 05 j 06:50	29°♂38'51 0.37567 AU	max. Earth dist.	-1496 Sep 10 j 02:35	14°♂32'57	2.50347 AU
opposition	-1501 Jul 06 j 15:13	29°♂17'19 -6°-24'-32		-1496 Oct 01 j 20:46	0°♄	
greatest brilliancy	-1501 Jul 06 j 06:18	29°♂23'15 -2.9m				
direct	-1501 Aug 05 j 08:00	24°♂20'20	conjunction	-1496 Oct 15 j 15:14	9°♄59'29	0°14'45
	-1501 Sep 04 j 22:31	0°♂	minimum elong	-1496 Oct 15 j 16:01	10°♄00'53	0°14'44
	-1501 Nov 03 j 12:15	0°♂	behind sun begin	-1496 Oct 15 j 06:20	9°♄43'12	
	-1501 Dec 21 j 11:36	0°♂	behind sun end	-1496 Oct 16 j 01:41	10°♄18'35	
asc. node	-1500 Jan 18 j 20:30	18°♂14'32	desc. node	-1496 Nov 07 j 04:01	26°♄40'49	
	-1500 Feb 06 j 03:05	0°♂		-1496 Nov 11 j 14:08	0°♄	
	-1500 Mar 24 j 02:00	0°♂	morning rise	-1496 Dec 10 j 14:42	22°♄06'42	
	-1500 May 10 j 12:17	0°♄		-1496 Dec 20 j 19:48	0°♂	
evening set	-1500 Jun 09 j 06:53	18°♄48'30		-1495 Jan 28 j 07:38	0°♂	
	-1500 Jun 26 j 22:24	0°♄		-1495 Mar 07 j 22:00	0°♂	
max. Earth dist.	-1500 Jul 15 j 14:27	11°♄54'22 2.66450 AU		-1495 Apr 16 j 13:09	0°♂	
				-1495 May 28 j 06:44	0°♂	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 41

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1495 Jul 12 j 17:45	0°♄				-1490 Sep 10 j 20:54	0°♍		
	-1495 Sep 05 j 05:24	0°♊				-1490 Oct 20 j 07:13	0°♎		
asc. node	-1495 Sep 09 j 17:23	2°♊00'30				-1490 Nov 27 j 18:35	0°♏		
retrograde	-1495 Oct 29 j 07:09	14°♊30'27				-1489 Jan 05 j 12:08	0°♐		
min. Earth dist.	-1495 Dec 06 j 08:14	5°♊26'28	0.65994 AU			-1489 Feb 14 j 09:57	0°♑		
opposition	-1495 Dec 08 j 09:46	4°♊36'41	3°08'55	evening set		-1489 Feb 23 j 08:31	6°♑33'11		
greatest brilliancy	-1495 Dec 08 j 00:43	4°♊45'47	-1.3m			-1489 Mar 28 j 02:50	0°♒		
	-1495 Dec 20 j 12:48	30°♋							
direct	-1494 Jan 17 j 01:43	25°♋07'25		conjunction		-1489 Apr 21 j 21:42	17°♒10'08	0°-6'-25	
	-1494 Feb 16 j 11:46	0°♋		minimum elong		-1489 Apr 21 j 22:03	17°♒10'44	0°06'25	
	-1494 Apr 25 j 02:58	0°♌		behind sun begin		-1489 Apr 21 j 00:56	16°♒34'40		
	-1494 Jun 15 j 12:48	0°♍		behind sun end		-1489 Apr 22 j 19:10	17°♒46'46		
	-1494 Jul 31 j 20:14	0°♎		asc. node		-1489 May 02 j 15:10	24°♒27'29		
	-1494 Sep 12 j 18:27	0°♏				-1489 May 10 j 20:47	0°♓		
desc. node	-1494 Sep 25 j 02:26	8°♏58'46		max. Earth dist.		-1489 May 19 j 06:43	5°♓37'08	2.58318 AU	
evening set	-1494 Oct 14 j 16:57	23°♏33'28		morning rise		-1489 Jun 13 j 08:58	22°♓07'22		
	-1494 Oct 23 j 05:31	0°♐				-1489 Jun 25 j 12:52	0°♔		
max. Earth dist.	-1494 Nov 18 j 04:23	19°♐56'49	2.38269 AU			-1489 Aug 11 j 20:29	0°♕		
	-1494 Dec 01 j 01:48	0°♑				-1489 Sep 29 j 21:08	0°♌		
						-1489 Nov 21 j 03:50	0°♍		
conjunction	-1494 Dec 14 j 07:23	10°♑23'07	0°-49'-11			-1488 Jan 27 j 23:09	0°♎		
minimum elong	-1494 Dec 14 j 04:28	10°♑17'23	0°49'12	retrograde		-1488 Feb 25 j 10:52	4°♎21'24		
	-1493 Jan 08 j 04:49	0°♒				-1488 Mar 23 j 00:51	30°♎		
	-1493 Feb 15 j 12:26	0°♓		opposition		-1488 Mar 31 j 08:19	27°♎14'22	2°24'18	
morning rise	-1493 Feb 20 j 21:47	4°♓10'08		greatest brilliancy		-1488 Apr 01 j 12:19	26°♎49'48	-2.0m	
	-1493 Mar 26 j 21:22	0°♓		min. Earth dist.		-1488 Apr 08 j 16:56	24°♎19'12	0.50443 AU	
	-1493 May 07 j 02:23	0°♔		direct		-1488 May 08 j 19:22	18°♎30'43		
	-1493 Jun 19 j 21:06	0°♕		desc. node		-1488 May 16 j 22:10	18°♎57'26		
asc. node	-1493 Jul 28 j 17:28	24°♕48'08				-1488 Jun 22 j 15:32	0°♏		
	-1493 Aug 06 j 07:02	0°♊				-1488 Aug 13 j 11:59	0°♐		
	-1493 Sep 30 j 07:10	0°♋				-1488 Sep 24 j 22:05	0°♌		
retrograde	-1493 Dec 02 j 21:59	18°♋09'47				-1488 Nov 04 j 00:36	0°♍		
opposition	-1492 Jan 11 j 13:15	8°♋44'29	4°31'51			-1488 Dec 13 j 23:47	0°♎		
greatest brilliancy	-1492 Jan 11 j 20:09	8°♋37'38	-1.2m			-1487 Jan 23 j 23:22	0°♏		
min. Earth dist.	-1492 Jan 13 j 08:13	8°♋01'50	0.67121 AU			-1487 Mar 07 j 14:30	0°♑		
	-1492 Feb 07 j 21:34	30°♋		asc. node		-1487 Mar 19 j 13:57	8°♑12'07		
direct	-1492 Feb 21 j 16:22	28°♋46'22		evening set		-1487 Apr 14 j 17:33	25°♑48'09		
	-1492 Mar 07 j 04:22	0°♌				-1487 Apr 21 j 01:15	0°♒		
	-1492 May 21 j 01:59	0°♍							
	-1492 Jul 09 j 18:41	0°♎		conjunction		-1487 Jun 04 j 00:38	28°♒42'22	0°41'08	
desc. node	-1492 Aug 12 j 01:13	22°♎28'27		minimum elong		-1487 Jun 03 j 23:19	28°♒40'15	0°41'09	
	-1492 Aug 22 j 16:45	0°♏				-1487 Jun 06 j 00:49	0°♐		
	-1492 Oct 02 j 09:22	0°♐		max. Earth dist.		-1487 Jun 14 j 00:27	5°♐08'05	2.65484 AU	
	-1492 Nov 10 j 05:09	0°♑		morning rise		-1487 Jul 20 j 21:23	28°♐40'33		
evening set	-1492 Dec 18 j 15:21	0°♒16'27				-1487 Jul 22 j 23:23	0°♓		
	-1492 Dec 18 j 07:00	0°♓				-1487 Sep 08 j 07:32	0°♔		
	-1491 Jan 25 j 15:11	0°♔				-1487 Oct 25 j 20:24	0°♕		
						-1487 Dec 13 j 01:29	0°♎		
conjunction	-1491 Feb 22 j 22:43	21°♔38'17	0°-58'-4			-1486 Feb 01 j 19:04	0°♏		
minimum elong	-1491 Feb 23 j 01:11	21°♔42'55	0°58'05	desc. node		-1486 Apr 03 j 22:49	28°♏40'50		
	-1491 Mar 06 j 02:34	0°♑				-1486 Apr 08 j 07:08	0°♒		
max. Earth dist.	-1491 Apr 11 j 14:30	26°♑36'14	2.46350 AU	retrograde		-1486 May 04 j 23:22	4°♒04'10		
	-1491 Apr 16 j 09:10	0°♒				-1486 May 31 j 15:25	30°♒		
morning rise	-1491 Apr 26 j 22:05	7°♒25'02		opposition		-1486 Jun 04 j 12:38	28°♒56'47	-4°-3'-1	
	-1491 May 29 j 20:58	0°♓		greatest brilliancy		-1486 Jun 05 j 06:09	28°♒44'43	-2.8m	
asc. node	-1491 Jun 14 j 16:41	10°♓31'27		min. Earth dist.		-1486 Jun 08 j 13:52	27°♒49'50	0.38709 AU	
	-1491 Jul 14 j 19:18	0°♔		direct		-1486 Jul 06 j 06:26	23°♒20'11		
	-1491 Sep 01 j 16:40	0°♕				-1486 Aug 07 j 22:25	0°♌		
	-1491 Oct 26 j 09:11	0°♍				-1486 Oct 03 j 04:48	0°♎		
retrograde	-1490 Jan 08 j 16:20	22°♍51'10				-1486 Nov 17 j 16:41	0°♏		
opposition	-1490 Feb 15 j 17:01	14°♍17'13	4°34'26			-1486 Dec 31 j 22:32	0°♑		
greatest brilliancy	-1490 Feb 16 j 20:59	13°♍50'23	-1.5m	asc. node		-1485 Feb 04 j 11:58	23°♑11'22		
min. Earth dist.	-1490 Feb 21 j 07:41	12°♍08'05	0.61726 AU			-1485 Feb 14 j 18:22	0°♒		
direct	-1490 Mar 28 j 18:56	4°♍22'24				-1485 Apr 01 j 16:44	0°♓		
	-1490 Jun 12 j 12:40	0°♎				-1485 May 18 j 13:15	0°♏		
desc. node	-1490 Jun 29 j 23:54	10°♎09'00		evening set		-1485 May 26 j 09:08	4°♏58'46		
	-1490 Jul 30 j 18:57	0°♏				-1485 Jul 04 j 17:29	0°♑		

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 42

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

max. Earth dist.	-1485 Jul 07 j 10:54	1° $\overline{5}$ 44'12	2.67249 AU			-1480 Oct 04 j 01:36	0° $\overline{\Pi}$	
				retrograde		-1480 Oct 15 j 15:41	0° $\overline{\Pi}$ 51'16	
conjunction	-1485 Jul 12 j 04:11	4° $\overline{5}$ 44'46	1°06'56			-1480 Oct 26 j 18:10	30° \overline{R} 8	
minimum elong	-1485 Jul 12 j 03:28	4° $\overline{5}$ 43'38	1°06'57	min. Earth dist.		-1480 Nov 21 j 01:57	22° $\overline{8}$ 19'07	0.63793 AU
	-1485 Aug 20 j 12:36	0° $\overline{\Omega}$		opposition		-1480 Nov 24 j 14:55	20° $\overline{8}$ 53'49	2°16'02
morning rise	-1485 Aug 26 j 00:04	3° $\overline{\Omega}$ 32'45		greatest brilliancy		-1480 Nov 24 j 04:05	21° $\overline{8}$ 04'43	-1.4m
	-1485 Oct 05 j 10:19	0° $\overline{\eta}$		direct		-1479 Jan 02 j 08:21	11° $\overline{8}$ 43'36	
	-1485 Nov 19 j 06:52	0° $\overline{\underline{\Omega}}$				-1479 Mar 08 j 09:59	0° $\overline{\Pi}$	
	-1484 Jan 02 j 05:08	0° $\overline{\mathbb{M}}$				-1479 May 04 j 15:56	0° $\overline{\overline{\Omega}}$	
	-1484 Feb 14 j 14:05	0° $\overline{\mathcal{X}}$				-1479 Jun 23 j 09:12	0° $\overline{\Omega}$	
desc. node	-1484 Feb 19 j 22:59	3° $\overline{\mathcal{X}}$ 43'06				-1479 Aug 08 j 04:47	0° $\overline{\eta}$	
	-1484 Mar 29 j 08:29	0° $\overline{\overline{\Omega}}$				-1479 Sep 20 j 00:59	0° $\overline{\underline{\Omega}}$	
	-1484 May 15 j 20:46	0° $\overline{\approx}$		evening set		-1479 Sep 23 j 14:52	2° $\overline{\underline{\Omega}}$ 35'21	
retrograde	-1484 Jul 18 j 18:00	22° $\overline{\approx}$ 07'39		max. Earth dist.		-1479 Oct 11 j 07:29	15° $\overline{\underline{\Omega}}$ 33'44	2.42595 AU
min. Earth dist.	-1484 Aug 14 j 13:24	17° $\overline{\approx}$ 26'01	0.41586 AU	desc. node		-1479 Oct 11 j 19:15	15° $\overline{\underline{\Omega}}$ 55'34	
greatest brilliancy	-1484 Aug 20 j 00:41	15° $\overline{\approx}$ 42'50	-2.6m			-1479 Oct 30 j 13:44	0° $\overline{\mathbb{M}}$	
opposition	-1484 Aug 21 j 20:10	15° $\overline{\approx}$ 08'25	-5°-53'-6					
direct	-1484 Sep 21 j 18:20	9° $\overline{\approx}$ 20'38		conjunction		-1479 Nov 18 j 18:43	14° $\overline{\mathbb{M}}$ 40'35	0°-25'-9
	-1484 Nov 26 j 22:10	0° $\overline{\mathcal{H}}$		minimum elong		-1479 Nov 18 j 17:01	14° $\overline{\mathbb{M}}$ 37'20	0°25'09
asc. node	-1484 Dec 22 j 10:35	13° $\overline{\mathcal{H}}$ 38'39				-1479 Dec 08 j 12:53	0° $\overline{\mathcal{X}}$	
	-1483 Jan 19 j 18:40	0° $\overline{\Upsilon}$				-1478 Jan 15 j 18:19	0° $\overline{\overline{\Omega}}$	
	-1483 Mar 10 j 13:16	0° $\overline{\mathcal{X}}$		morning rise		-1478 Jan 22 j 05:18	5° $\overline{\overline{\Omega}}$ 04'32	
	-1483 Apr 28 j 08:14	0° $\overline{\Pi}$				-1478 Feb 23 j 03:18	0° $\overline{\approx}$	
	-1483 Jun 15 j 09:20	0° $\overline{\overline{\Omega}}$				-1478 Apr 03 j 13:02	0° $\overline{\mathcal{H}}$	
evening set	-1483 Jul 02 j 08:54	10° $\overline{\overline{\Omega}}$ 45'49				-1478 May 14 j 20:05	0° $\overline{\Upsilon}$	
max. Earth dist.	-1483 Jul 30 j 18:45	29° $\overline{\overline{\Omega}}$ 02'04	2.63612 AU			-1478 Jun 27 j 23:27	0° $\overline{\mathcal{X}}$	
	-1483 Aug 01 j 06:24	0° $\overline{\Omega}$		asc. node		-1478 Aug 14 j 08:28	29° $\overline{\mathcal{X}}$ 11'08	
						-1478 Aug 15 j 18:38	0° $\overline{\Pi}$	
conjunction	-1483 Aug 17 j 12:36	10° $\overline{\Omega}$ 38'34	1°06'35			-1478 Oct 18 j 23:15	0° $\overline{\overline{\Omega}}$	
minimum elong	-1483 Aug 17 j 13:20	10° $\overline{\Omega}$ 39'48	1°06'35	retrograde		-1478 Nov 19 j 09:12	5° $\overline{\overline{\Omega}}$ 22'58	
	-1483 Sep 15 j 12:55	0° $\overline{\eta}$				-1478 Dec 18 j 04:32	30° \overline{R} $\overline{\Pi}$	
morning rise	-1483 Oct 02 j 12:09	11° $\overline{\eta}$ 33'22		opposition		-1478 Dec 29 j 07:42	25° $\overline{\Pi}$ 43'54	4°08'30
	-1483 Oct 29 j 01:15	0° $\overline{\underline{\Omega}}$		greatest brilliancy		-1478 Dec 29 j 07:01	25° $\overline{\Pi}$ 44'35	-1.2m
	-1483 Dec 09 j 22:32	0° $\overline{\mathbb{M}}$		min. Earth dist.		-1478 Dec 29 j 14:14	25° $\overline{\Pi}$ 37'21	0.67454 AU
desc. node	-1482 Jan 06 j 21:20	20° $\overline{\mathbb{M}}$ 33'51		direct		-1477 Feb 08 j 00:35	15° $\overline{\Pi}$ 53'54	
	-1482 Jan 19 j 13:25	0° $\overline{\mathcal{X}}$				-1477 Apr 04 j 11:34	0° $\overline{\overline{\Omega}}$	
	-1482 Feb 28 j 11:26	0° $\overline{\overline{\Omega}}$				-1477 Jun 01 j 05:04	0° $\overline{\Omega}$	
	-1482 Apr 09 j 14:39	0° $\overline{\approx}$				-1477 Jul 19 j 01:47	0° $\overline{\eta}$	
	-1482 May 21 j 13:43	0° $\overline{\mathcal{H}}$		desc. node		-1477 Aug 29 j 17:37	28° $\overline{\eta}$ 45'01	
	-1482 Jul 08 j 14:44	0° $\overline{\Upsilon}$				-1477 Aug 31 j 11:26	0° $\overline{\underline{\Omega}}$	
retrograde	-1482 Sep 07 j 22:45	19° $\overline{\Upsilon}$ 56'49				-1477 Oct 11 j 00:33	0° $\overline{\mathbb{M}}$	
min. Earth dist.	-1482 Oct 09 j 11:42	13° $\overline{\Upsilon}$ 09'11	0.54156 AU			-1477 Nov 18 j 19:44	0° $\overline{\mathcal{X}}$	
opposition	-1482 Oct 16 j 12:04	10° $\overline{\Upsilon}$ 27'42	-1°-6'-35	evening set		-1477 Nov 22 j 04:38	2° $\overline{\mathcal{X}}$ 38'42	
greatest brilliancy	-1482 Oct 16 j 02:08	10° $\overline{\Upsilon}$ 37'16	-1.9m			-1477 Dec 26 j 21:11	0° $\overline{\overline{\Omega}}$	
asc. node	-1482 Nov 09 j 10:17	3° $\overline{\Upsilon}$ 26'04						
direct	-1482 Nov 20 j 23:39	2° $\overline{\Upsilon}$ 32'11		conjunction		-1476 Jan 27 j 10:42	24° $\overline{\overline{\Omega}}$ 46'29	-1°-6'00
	-1481 Feb 11 j 13:17	0° $\overline{\mathcal{X}}$		minimum elong		-1476 Jan 27 j 10:55	24° $\overline{\overline{\Omega}}$ 46'56	1°06'01
	-1481 Apr 07 j 00:34	0° $\overline{\Pi}$				-1476 Feb 03 j 04:05	0° $\overline{\approx}$	
	-1481 May 27 j 05:00	0° $\overline{\overline{\Omega}}$				-1476 Mar 13 j 13:16	0° $\overline{\mathcal{H}}$	
	-1481 Jul 13 j 19:49	0° $\overline{\Omega}$		max. Earth dist.		-1476 Mar 17 j 04:47	2° $\overline{\mathcal{H}}$ 43'02	2.41049 AU
evening set	-1481 Aug 10 j 07:31	18° $\overline{\Omega}$ 02'51		morning rise		-1476 Apr 03 j 19:30	15° $\overline{\mathcal{H}}$ 40'44	
max. Earth dist.	-1481 Aug 28 j 03:36	0° $\overline{\eta}$ 04'20	2.54901 AU			-1476 Apr 23 j 17:33	0° $\overline{\Upsilon}$	
	-1481 Aug 28 j 01:03	0° $\overline{\eta}$				-1476 Jun 06 j 05:23	0° $\overline{\mathcal{X}}$	
				asc. node		-1476 Jul 01 j 08:10	16° $\overline{\mathcal{X}}$ 32'12	
conjunction	-1481 Sep 27 j 23:38	21° $\overline{\eta}$ 28'14	0°35'36			-1476 Jul 22 j 11:36	0° $\overline{\Pi}$	
minimum elong	-1481 Sep 28 j 01:02	21° $\overline{\eta}$ 30'42	0°35'35			-1476 Sep 10 j 17:11	0° $\overline{\overline{\Omega}}$	
	-1481 Oct 09 j 23:16	0° $\overline{\underline{\Omega}}$				-1476 Nov 11 j 10:02	0° $\overline{\Omega}$	
morning rise	-1481 Nov 18 j 17:38	29° $\overline{\underline{\Omega}}$ 06'58		retrograde		-1476 Dec 24 j 06:45	9° $\overline{\Omega}$ 06'22	
	-1481 Nov 19 j 22:02	0° $\overline{\mathbb{M}}$		opposition		-1475 Feb 01 j 02:09	0° $\overline{\Omega}$ 09'07	4°44'31
desc. node	-1481 Nov 24 j 20:08	3° $\overline{\mathbb{M}}$ 41'12				-1475 Feb 01 j 11:30	30° \overline{R} $\overline{\overline{\Omega}}$	
	-1481 Dec 29 j 10:11	0° $\overline{\mathcal{X}}$		greatest brilliancy		-1475 Feb 01 j 22:15	29° $\overline{\overline{\Omega}}$ 49'30	-1.3m
	-1480 Feb 06 j 04:13	0° $\overline{\overline{\Omega}}$		min. Earth dist.		-1475 Feb 05 j 05:27	28° $\overline{\overline{\Omega}}$ 32'11	0.64607 AU
	-1480 Mar 16 j 00:11	0° $\overline{\approx}$		direct		-1475 Mar 14 j 09:35	20° $\overline{\overline{\Omega}}$ 07'56	
	-1480 Apr 24 j 21:55	0° $\overline{\mathcal{H}}$				-1475 Apr 27 j 08:38	0° $\overline{\Omega}$	
	-1480 Jun 06 j 04:43	0° $\overline{\Upsilon}$				-1475 Jun 24 j 07:35	0° $\overline{\eta}$	
	-1480 Jul 23 j 10:25	0° $\overline{\mathcal{X}}$		desc. node		-1475 Jul 16 j 16:28	14° $\overline{\eta}$ 10'03	
asc. node	-1480 Sep 26 j 09:50	28° $\overline{\mathcal{X}}$ 34'47				-1475 Aug 09 j 01:18	0° $\overline{\underline{\Omega}}$	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 43

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1475 Sep 19 j 08:45	0°♍		max. Earth dist.	-1470 Jun 28 j 12:48	21°♊43'43	2.67206 AU
	-1475 Oct 28 j 10:55	0°♌			-1470 Jul 11 j 12:21	0°♏	
	-1475 Dec 05 j 16:51	0°♎		morning rise	-1470 Aug 11 j 23:19	20°♏04'57	
	-1474 Jan 13 j 05:12	0°♏			-1470 Aug 27 j 10:32	0°♎	
evening set	-1474 Jan 30 j 02:01	12°♏53'35			-1470 Oct 12 j 19:38	0°♍	
	-1474 Feb 21 j 21:33	0°♋			-1470 Nov 27 j 14:21	0°♌	
					-1469 Jan 12 j 01:52	0°♍	
conjunction	-1474 Apr 01 j 11:37	27°♋57'26	0°-28'-14		-1469 Feb 27 j 02:17	0°♌	
minimum elong	-1474 Apr 01 j 13:16	28°♋00'22	0°28'14	desc. node	-1469 Mar 08 j 14:57	6°♌03'32	
	-1474 Apr 04 j 08:57	0°♍			-1469 Apr 17 j 15:41	0°♎	
max. Earth dist.	-1474 May 06 j 21:15	22°♍31'16	2.54120 AU	retrograde	-1469 Jun 23 j 05:26	22°♎32'39	
	-1474 May 17 j 22:50	0°♌		min. Earth dist.	-1469 Jul 20 j 13:28	18°♎04'11	0.38294 AU
asc. node	-1474 May 19 j 07:20	0°♌54'34		opposition	-1469 Jul 24 j 15:46	16°♎56'04	-6°-48'-8
morning rise	-1474 May 27 j 11:03	6°♌21'34		greatest brilliancy	-1469 Jul 23 j 12:57	17°♎14'44	-2.8m
	-1474 Jul 02 j 14:52	0°♊		direct	-1469 Aug 23 j 10:18	11°♎52'34	
	-1474 Aug 19 j 07:52	0°♏			-1469 Oct 22 j 03:19	0°♏	
	-1474 Oct 08 j 16:41	0°♎			-1469 Dec 13 j 21:14	0°♋	
	-1474 Dec 04 j 23:35	0°♍		asc. node	-1468 Jan 09 j 03:19	16°♋12'59	
retrograde	-1473 Feb 04 j 23:37	16°♍59'14			-1468 Jan 31 j 03:22	0°♍	
opposition	-1473 Mar 13 j 07:37	9°♍12'20	3°37'51		-1468 Mar 18 j 20:35	0°♌	
greatest brilliancy	-1473 Mar 14 j 17:43	8°♍40'58	-1.8m		-1468 May 05 j 16:16	0°♊	
min. Earth dist.	-1473 Mar 20 j 21:48	6°♍25'07	0.55438 AU	evening set	-1468 Jun 17 j 17:30	27°♊06'30	
	-1473 Apr 16 j 19:28	30°♌0			-1468 Jun 22 j 06:59	0°♏	
direct	-1473 Apr 22 j 05:46	29°♌47'54		max. Earth dist.	-1468 Jul 21 j 02:06	18°♏22'38	2.65668 AU
	-1473 Apr 27 j 17:55	0°♍					
desc. node	-1473 Jun 03 j 16:07	9°♍50'34		conjunction	-1468 Aug 02 j 19:25	26°♏34'58	1°10'05
	-1473 Jul 12 j 04:32	0°♌		minimum elong	-1468 Aug 02 j 19:35	26°♏35'14	1°10'05
	-1473 Aug 26 j 08:01	0°♍			-1468 Aug 08 j 01:54	0°♎	
	-1473 Oct 05 j 23:01	0°♌		morning rise	-1468 Sep 16 j 22:04	26°♎14'19	
	-1473 Nov 14 j 03:21	0°♎			-1468 Sep 22 j 12:51	0°♍	
	-1473 Dec 23 j 10:27	0°♏			-1468 Nov 05 j 11:16	0°♌	
	-1472 Feb 01 j 20:44	0°♋			-1468 Dec 17 j 23:09	0°♍	
	-1472 Mar 15 j 00:43	0°♍		desc. node	-1467 Jan 23 j 14:23	26°♍32'09	
evening set	-1472 Mar 27 j 08:43	8°♍31'16			-1467 Jan 28 j 08:01	0°♌	
asc. node	-1472 Apr 05 j 04:48	14°♍33'43			-1467 Mar 10 j 03:14	0°♎	
	-1472 Apr 28 j 03:03	0°♌			-1467 Apr 20 j 11:43	0°♏	
					-1467 Jun 04 j 02:13	0°♋	
conjunction	-1472 May 18 j 23:30	13°♌46'57	0°24'57		-1467 Aug 13 j 08:04	0°♍	
minimum elong	-1472 May 18 j 22:29	13°♌45'17	0°24'58	retrograde	-1467 Aug 21 j 05:03	0°♍26'24	
max. Earth dist.	-1472 Jun 04 j 05:34	24°♌22'51	2.63323 AU		-1467 Aug 28 j 22:24	30°♌♋	
	-1472 Jun 12 j 21:58	0°♊		min. Earth dist.	-1467 Sep 19 j 13:42	24°♋30'14	0.49213 AU
morning rise	-1472 Jul 06 j 12:27	15°♊08'36		greatest brilliancy	-1467 Sep 26 j 09:21	22°♋01'16	-2.1m
	-1472 Jul 29 j 21:50	0°♏		opposition	-1467 Sep 27 j 12:28	21°♋36'26	-2°-54'-31
	-1472 Sep 15 j 16:51	0°♎		direct	-1467 Oct 31 j 08:39	14°♋24'38	
	-1472 Nov 03 j 10:39	0°♍		asc. node	-1467 Nov 26 j 02:10	18°♋15'39	
	-1472 Dec 24 j 15:42	0°♌			-1467 Dec 27 j 10:25	0°♍	
retrograde	-1471 Feb 25 j 02:24	0°♍			-1466 Feb 23 j 01:58	0°♌	
desc. node	-1471 Apr 04 j 09:44	7°♍39'13			-1466 Apr 15 j 10:21	0°♊	
opposition	-1471 Apr 20 j 15:19	6°♍01'56			-1466 Jun 03 j 13:12	0°♏	
greatest brilliancy	-1471 May 06 j 14:55	1°♍48'22	-1°00'-30		-1466 Jul 20 j 19:02	0°♎	
	-1471 May 07 j 01:06	1°♍40'35	-2.5m	evening set	-1466 Jul 25 j 18:08	3°♎13'37	
	-1471 May 12 j 12:39	30°♌0		max. Earth dist.	-1466 Aug 16 j 07:30	17°♎25'55	2.58874 AU
min. Earth dist.	-1471 May 14 j 02:40	29°♌31'33	0.42527 AU		-1466 Sep 03 j 23:42	0°♍	
direct	-1471 Jun 10 j 08:30	24°♌51'22					
	-1471 Jul 08 j 16:33	0°♍		conjunction	-1466 Sep 10 j 23:47	4°♍46'40	0°51'32
	-1471 Sep 03 j 19:40	0°♌		minimum elong	-1466 Sep 11 j 01:12	4°♍49'04	0°51'31
	-1471 Oct 17 j 18:13	0°♎			-1466 Oct 17 j 02:28	0°♌	
	-1471 Nov 28 j 19:06	0°♏		morning rise	-1466 Oct 29 j 17:45	9°♌03'35	
	-1470 Jan 10 j 04:58	0°♋			-1466 Nov 27 j 08:40	0°♍	
asc. node	-1470 Feb 21 j 03:35	28°♋49'40		desc. node	-1466 Dec 11 j 12:55	10°♍34'12	
	-1470 Feb 22 j 21:13	0°♍			-1465 Jan 06 j 05:22	0°♌	
	-1470 Apr 09 j 01:49	0°♌			-1465 Feb 14 j 07:45	0°♎	
evening set	-1470 May 10 j 21:51	20°♌38'14			-1465 Mar 25 j 11:43	0°♏	
	-1470 May 25 j 11:52	0°♊			-1465 May 04 j 20:07	0°♋	
					-1465 Jun 17 j 03:05	0°♍	
conjunction	-1470 Jun 27 j 17:08	21°♊12'24	0°59'51		-1465 Aug 07 j 09:00	0°♌	
minimum elong	-1470 Jun 27 j 16:01	21°♊10'37	0°59'52	retrograde	-1465 Oct 02 j 09:56	16°♌17'40	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 44

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

asc. node	-1465 Oct 14 j 01:04	15°♄19'57			-1460 Nov 05 j 08:37	0°♂	
min. Earth dist.	-1465 Nov 06 j 01:53	8°♄21'45	0.60669 AU		-1460 Dec 13 j 11:31	0°♂	
opposition	-1465 Nov 11 j 01:23	6°♄22'45	1°09'48	evening set	-1459 Jan 03 j 06:38	16°♂19'59	
greatest brilliancy	-1465 Nov 10 j 17:15	6°♄30'51	-1.6m		-1459 Jan 20 j 20:17	0°≈	
	-1465 Nov 29 j 17:01	30°♄			-1459 Mar 01 j 08:17	0°♂	
direct	-1465 Dec 18 j 15:55	27°♄36'30					
	-1464 Jan 08 j 04:18	0°♄		conjunction	-1459 Mar 09 j 08:12	5°♂55'27	0°-48'-44
	-1464 Mar 20 j 22:51	0°♄		minimum elong	-1459 Mar 09 j 10:50	6°♂00'18	0°48'43
	-1464 May 13 j 05:09	0°♄			-1459 Apr 11 j 15:18	0°♄	
	-1464 Jun 30 j 20:53	0°♄		max. Earth dist.	-1459 Apr 22 j 02:27	7°♄22'07	2.49224 AU
	-1464 Aug 15 j 08:52	0°♄		morning rise	-1459 May 08 j 16:49	18°♄51'51	
evening set	-1464 Sep 04 j 18:17	14°♄04'05			-1459 May 25 j 02:19	0°♄	
max. Earth dist.	-1464 Sep 19 j 17:31	24°♄38'34	2.47597 AU	asc. node	-1459 Jun 04 j 22:11	7°♄14'15	
	-1464 Sep 27 j 04:54	0°♄			-1459 Jul 09 j 20:37	0°♄	
					-1459 Aug 27 j 04:22	0°♄	
conjunction	-1464 Oct 27 j 06:17	22°♄02'48	0°00'50		-1459 Oct 18 j 17:41	0°♄	
minimum elong	-1464 Oct 27 j 06:17	22°♄02'47	0°00'49		-1458 Jan 01 j 13:35	0°♄	
behind sun begin	-1464 Oct 26 j 07:02	21°♄19'28		retrograde	-1458 Jan 18 j 02:35	1°♄33'07	
behind sun end	-1464 Oct 28 j 05:32	22°♄46'10			-1458 Feb 02 j 17:09	30°♄	
desc. node	-1464 Oct 28 j 11:42	22°♄57'41		opposition	-1458 Feb 24 j 14:06	23°♄14'14	4°20'06
	-1464 Nov 06 j 20:42	0°♄		greatest brilliancy	-1458 Feb 25 j 21:27	22°♄44'29	-1.6m
	-1464 Dec 16 j 00:04	0°♄		min. Earth dist.	-1458 Mar 02 j 22:48	20°♄49'31	0.59724 AU
morning rise	-1464 Dec 25 j 03:17	7°♄06'30		direct	-1458 Apr 06 j 08:43	13°♄26'50	
	-1463 Jan 23 j 09:30	0°♄			-1458 Jun 03 j 00:54	0°♄	
	-1463 Mar 02 j 21:26	0°≈		desc. node	-1458 Jun 20 j 08:05	9°♄07'41	
	-1463 Apr 11 j 09:44	0°♂			-1458 Jul 24 j 08:04	0°♄	
	-1463 May 22 j 21:40	0°♄			-1458 Sep 05 j 04:52	0°♄	
	-1463 Jul 06 j 16:30	0°♄			-1458 Oct 14 j 23:18	0°♄	
	-1463 Aug 27 j 02:37	0°♄			-1458 Nov 22 j 15:32	0°♄	
asc. node	-1463 Aug 31 j 00:49	2°♄00'02			-1458 Dec 31 j 12:41	0°≈	
retrograde	-1463 Nov 06 j 00:24	22°♄29'09			-1457 Feb 09 j 13:40	0°♂	
min. Earth dist.	-1463 Dec 14 j 20:24	13°♄09'29	0.66793 AU	evening set	-1457 Mar 07 j 22:11	19°♂04'25	
opposition	-1463 Dec 16 j 02:13	12°♄39'31	3°34'05		-1457 Mar 23 j 09:11	0°♄	
greatest brilliancy	-1463 Dec 15 j 19:29	12°♄46'18	-1.3m	asc. node	-1457 Apr 22 j 21:45	21°♄02'30	
direct	-1462 Jan 25 j 03:57	3°♄01'49					
	-1462 Apr 18 j 01:39	0°♄		conjunction	-1457 May 02 j 13:24	27°♄33'34	0°05'45
	-1462 Jun 10 j 02:45	0°♄		minimum elong	-1457 May 02 j 13:07	27°♄33'05	0°05'46
	-1462 Jul 26 j 21:58	0°♄		behind sun begin	-1457 May 01 j 16:20	26°♄58'10	
	-1462 Sep 08 j 00:22	0°♄		behind sun end	-1457 May 03 j 09:53	28°♄07'57	
desc. node	-1462 Sep 15 j 11:29	5°♄24'28			-1457 May 06 j 04:44	0°♄	
	-1462 Oct 18 j 12:11	0°♄		max. Earth dist.	-1457 May 25 j 18:17	12°♄59'28	2.60301 AU
evening set	-1462 Oct 27 j 19:05	7°♄05'10			-1457 Jun 20 j 20:32	0°♄	
	-1462 Nov 26 j 07:55	0°♄		morning rise	-1457 Jun 22 j 10:36	1°♄01'25	
					-1457 Aug 06 j 23:57	0°♄	
conjunction	-1462 Dec 29 j 22:19	26°♄27'39	0°-59'-14		-1457 Sep 24 j 11:07	0°♄	
minimum elong	-1462 Dec 29 j 19:49	26°♄22'43	0°59'16		-1457 Nov 14 j 01:55	0°♄	
	-1461 Jan 03 j 09:57	0°♄			-1456 Jan 10 j 15:59	0°♄	
max. Earth dist.	-1461 Jan 08 j 19:26	4°♄15'18	2.37347 AU	retrograde	-1456 Mar 09 j 08:02	15°♄42'38	
	-1461 Feb 10 j 16:32	0°≈		opposition	-1456 Apr 12 j 08:56	9°♄00'53	1°23'46
morning rise	-1461 Mar 09 j 06:53	20°≈24'35		greatest brilliancy	-1456 Apr 13 j 02:51	8°♄45'46	-2.2m
	-1461 Mar 22 j 00:38	0°♂		min. Earth dist.	-1456 Apr 20 j 20:09	6°♄10'30	0.47551 AU
	-1461 May 02 j 04:13	0°♄		desc. node	-1456 May 07 j 07:30	1°♄53'44	
	-1461 Jun 14 j 18:34	0°♄		direct	-1456 May 19 j 17:02	0°♄49'08	
asc. node	-1461 Jul 18 j 23:16	22°♄09'00			-1456 Aug 04 j 10:47	0°♄	
	-1461 Jul 31 j 14:40	0°♄			-1456 Sep 17 j 22:28	0°♄	
	-1461 Sep 22 j 04:04	0°♄			-1456 Oct 28 j 21:36	0°♄	
retrograde	-1461 Dec 10 j 21:35	25°♄59'09			-1456 Dec 08 j 09:12	0°≈	
opposition	-1460 Jan 19 j 06:37	16°♄42'53	4°40'00		-1455 Jan 18 j 17:51	0°♂	
greatest brilliancy	-1460 Jan 19 j 18:07	16°♄31'31	-1.3m		-1455 Mar 02 j 15:52	0°♄	
min. Earth dist.	-1460 Jan 21 j 21:29	15°♄40'46	0.66515 AU	asc. node	-1455 Mar 09 j 19:52	4°♄53'38	
direct	-1460 Feb 29 j 12:33	6°♄42'17			-1455 Apr 16 j 07:28	0°♄	
	-1460 May 13 j 11:04	0°♄		evening set	-1455 Apr 24 j 13:24	5°♄25'39	
	-1460 Jul 04 j 01:50	0°♄			-1455 Jun 01 j 09:41	0°♄	
desc. node	-1460 Aug 02 j 10:04	19°♄26'49					
	-1460 Aug 17 j 13:14	0°♄		conjunction	-1455 Jun 12 j 19:59	7°♄20'16	0°49'02
	-1460 Sep 27 j 10:44	0°♄		minimum elong	-1455 Jun 12 j 18:39	7°♄18'08	0°49'03
greatest brilliancy	-1460 Nov 04 j 00:11	28°♄56'33	1.2m	max. Earth dist.	-1455 Jun 19 j 11:15	11°♄35'09	2.66324 AU

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 45

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1455 Jul 18 j 08:08	0°☿		min. Earth dist.	-1450 Oct 19 j 23:17	23°♊07'35	0.56702 AU
morning rise	-1455 Jul 28 j 23:52	6°♊46'55		opposition	-1450 Oct 26 j 07:02	20°♊39'15	0°-11'-47
	-1455 Sep 03 j 11:40	0°♊		greatest brilliancy	-1450 Nov 15 j 07:24	14°♊10'22	-1.9m
	-1455 Oct 20 j 12:48	0°♋		asc. node	-1450 Oct 30 j 16:27	18°♊57'54	
	-1455 Dec 06 j 16:06	0°♌		direct	-1450 Dec 01 j 13:53	12°♊23'22	
	-1454 Jan 23 j 19:31	0°♍			-1449 Feb 02 j 08:19	0°♋	
	-1454 Mar 17 j 06:40	0°♎			-1449 Apr 01 j 00:57	0°♌	
desc. node	-1454 Mar 25 j 07:27	4°♎01'50			-1449 May 22 j 03:01	0°♍	
retrograde	-1454 May 23 j 00:24	21°♎11'11			-1449 Jul 09 j 02:02	0°♎	
opposition	-1454 Jun 22 j 08:15	16°♎11'26	-5°-35'-25	evening set	-1449 Aug 19 j 13:04	27°♎22'12	
greatest brilliancy	-1454 Jun 22 j 14:07	16°♎07'32	-2.9m		-1449 Aug 23 j 10:01	0°♏	
min. Earth dist.	-1454 Jun 23 j 12:04	15°♎52'56	0.37694 AU	max. Earth dist.	-1449 Sep 04 j 21:25	8°♏33'23	2.52462 AU
direct	-1454 Jul 22 j 16:10	11°♎04'33			-1449 Oct 05 j 07:59	0°♐	
	-1454 Sep 20 j 10:56	0°♑					
	-1454 Nov 09 j 15:01	0°♒		conjunction	-1449 Oct 08 j 07:35	2°♐08'39	0°24'13
	-1454 Dec 25 j 13:15	0°♓		minimum elong	-1449 Oct 08 j 08:42	2°♐10'41	0°24'12
asc. node	-1453 Jan 25 j 18:18	20°♓31'37		desc. node	-1449 Nov 15 j 05:19	0°♑01'15	
	-1453 Feb 09 j 06:04	0°♈			-1449 Nov 15 j 04:39	0°♒	
	-1453 Mar 27 j 16:20	0°♉		morning rise	-1449 Dec 01 j 05:49	12°♒07'08	
	-1453 May 13 j 19:38	0°♊			-1449 Dec 24 j 13:39	0°♓	
evening set	-1453 Jun 03 j 23:31	13°♊24'19			-1448 Feb 01 j 04:16	0°♑	
	-1453 Jun 30 j 03:03	0°♋			-1448 Mar 10 j 20:24	0°♒	
max. Earth dist.	-1453 Jul 12 j 18:04	8°♋02'52	2.66906 AU		-1448 Apr 19 j 12:59	0°♓	
					-1448 May 31 j 09:46	0°♈	
conjunction	-1453 Jul 20 j 09:52	12°♋56'38	1°09'16		-1448 Jul 16 j 08:36	0°♉	
minimum elong	-1453 Jul 20 j 09:28	12°♋55'59	1°09'17		-1448 Sep 12 j 02:40	0°♊	
	-1453 Aug 15 j 21:41	0°♌		asc. node	-1448 Sep 16 j 14:57	1°♊42'51	
morning rise	-1453 Sep 03 j 04:57	11°♌54'49		retrograde	-1448 Oct 23 j 13:39	9°♊14'25	
	-1453 Sep 30 j 15:07	0°♍		min. Earth dist.	-1448 Nov 29 j 21:30	0°♋24'09	0.65136 AU
	-1453 Nov 14 j 02:43	0°♎			-1448 Nov 30 j 21:31	30°♋	
	-1453 Dec 27 j 10:37	0°♏		opposition	-1448 Dec 02 j 15:04	29°♋18'10	2°48'28
	-1452 Feb 07 j 22:19	0°♐		greatest brilliancy	-1448 Dec 02 j 04:40	29°♋28'39	-1.4m
desc. node	-1452 Feb 10 j 06:08	1°♐39'06		direct	-1447 Jan 10 j 21:16	19°♋56'53	
	-1452 Mar 21 j 06:09	0°♑			-1447 Feb 25 j 13:44	0°♌	
	-1452 May 04 j 06:40	0°♒			-1447 Apr 28 j 13:02	0°♍	
	-1452 Jun 27 j 20:50	0°♓			-1447 Jun 18 j 05:36	0°♎	
retrograde	-1452 Jul 31 j 19:39	7°♓24'17			-1447 Aug 03 j 09:10	0°♏	
min. Earth dist.	-1452 Aug 28 j 05:52	2°♓19'53	0.44150 AU		-1447 Sep 15 j 07:56	0°♐	
greatest brilliancy	-1452 Sep 03 j 12:29	0°♓14'05	-2.4m	desc. node	-1447 Oct 02 j 03:41	12°♐16'08	
	-1452 Sep 04 j 05:11	30°♓		evening set	-1447 Oct 05 j 05:53	14°♐33'10	
opposition	-1452 Sep 05 j 05:53	29°♓39'16	-4°-52'-14		-1447 Oct 25 j 20:44	0°♑	
direct	-1452 Oct 07 j 04:33	23°♓20'32		max. Earth dist.	-1447 Oct 28 j 10:42	1°♑57'34	2.40014 AU
	-1452 Nov 10 j 14:40	0°♔					
asc. node	-1452 Dec 12 j 17:58	13°♔51'44		conjunction	-1447 Dec 02 j 19:09	29°♑13'42	0°-39'-27
	-1451 Jan 12 j 04:19	0°♈		minimum elong	-1447 Dec 02 j 16:34	29°♑08'40	0°39'28
	-1451 Mar 04 j 18:26	0°♉			-1447 Dec 03 j 18:52	0°♓	
	-1451 Apr 23 j 06:55	0°♊			-1446 Jan 10 j 23:06	0°♑	
	-1451 Jun 10 j 16:09	0°♋		morning rise	-1446 Feb 07 j 21:49	21°♑55'41	
evening set	-1451 Jul 10 j 18:25	19°♑05'22			-1446 Feb 18 j 06:49	0°♒	
	-1451 Jul 27 j 16:11	0°♌			-1446 Mar 29 j 15:01	0°♓	
max. Earth dist.	-1451 Aug 05 j 14:35	5°♌49'30	2.62144 AU		-1446 May 09 j 19:21	0°♈	
					-1446 Jun 22 j 15:14	0°♉	
conjunction	-1451 Aug 26 j 03:55	19°♌24'25	1°02'28	asc. node	-1446 Aug 04 j 15:11	27°♉08'08	
minimum elong	-1451 Aug 26 j 04:58	19°♌26'10	1°02'28		-1446 Aug 09 j 10:36	0°♊	
	-1451 Sep 10 j 22:15	0°♍			-1446 Oct 05 j 18:14	0°♋	
morning rise	-1451 Oct 11 j 21:53	21°♍18'03		retrograde	-1446 Nov 27 j 03:36	13°♍10'41	
	-1451 Oct 24 j 07:12	0°♎		opposition	-1445 Jan 05 j 22:03	3°♍38'43	4°23'23
	-1451 Dec 04 j 22:46	0°♏		greatest brilliancy	-1445 Jan 06 j 01:24	3°♍35'23	-1.2m
desc. node	-1451 Dec 28 j 06:00	17°♏14'34		min. Earth dist.	-1445 Jan 07 j 00:30	3°♍12'20	0.67400 AU
	-1450 Jan 14 j 06:16	0°♐			-1445 Jan 15 j 06:44	30°♏	
	-1450 Feb 22 j 19:55	0°♑		direct	-1445 Feb 15 j 20:42	23°♏43'41	
	-1450 Apr 03 j 12:12	0°♒			-1445 Mar 22 j 16:20	0°♓	
	-1450 May 14 j 15:45	0°♓			-1445 May 25 j 20:22	0°♔	
	-1450 Jun 29 j 01:21	0°♈			-1445 Jul 13 j 18:22	0°♉	
	-1450 Sep 09 j 23:45	0°♉		desc. node	-1445 Aug 20 j 02:11	25°♉26'11	
retrograde	-1450 Sep 17 j 06:01	0°♊21'45			-1445 Aug 26 j 12:19	0°♋	
	-1450 Sep 24 j 07:56	30°♊			-1445 Oct 06 j 04:17	0°♌	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 46

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1445 Nov 14 j 00:13	0°♊		morning rise	-1440 Jul 14 j 19:38	23°♊23'01	
evening set	-1445 Dec 07 j 11:57	18°♊29'29			-1440 Jul 25 j 05:37	0°♊	
	-1445 Dec 22 j 01:53	0°♊			-1440 Sep 10 j 17:48	0°♊	
	-1444 Jan 29 j 08:54	0°♊			-1440 Oct 28 j 17:54	0°♊	
					-1440 Dec 17 j 00:40	0°♊	
conjunction	-1444 Feb 12 j 05:25	10°♊40'42	-1°-3'-2		-1439 Feb 08 j 20:24	0°♊	
minimum elong	-1444 Feb 12 j 07:11	10°♊44'06	1°03'04	desc. node	-1439 Apr 10 j 23:43	21°♊46'10	
	-1444 Mar 08 j 18:17	0°♊		retrograde	-1439 Apr 21 j 05:06	22°♊23'52	
max. Earth dist.	-1444 Apr 02 j 00:13	17°♊50'49	2.43954 AU	opposition	-1439 May 22 j 08:24	17°♊00'04	-2°-42'-26
morning rise	-1444 Apr 17 j 07:34	28°♊50'36		greatest brilliancy	-1439 May 23 j 03:19	16°♊46'27	-2.7m
	-1444 Apr 18 j 22:37	0°♊		min. Earth dist.	-1439 May 28 j 06:12	15°♊18'07	0.40157 AU
	-1444 Jun 01 j 08:41	0°♊		direct	-1439 Jun 24 j 10:26	10°♊49'24	
asc. node	-1444 Jun 21 j 14:43	13°♊25'54			-1439 Aug 22 j 10:39	0°♊	
	-1444 Jul 17 j 08:26	0°♊			-1439 Oct 09 j 13:41	0°♊	
	-1444 Sep 04 j 15:43	0°♊			-1439 Nov 22 j 04:05	0°♊	
	-1444 Oct 31 j 07:46	0°♊			-1438 Jan 04 j 10:39	0°♊	
retrograde	-1443 Jan 01 j 23:27	17°♊20'08		asc. node	-1438 Feb 11 j 10:14	25°♊48'55	
opposition	-1443 Feb 09 j 08:32	8°♊35'06	4°40'18		-1438 Feb 17 j 16:11	0°♊	
greatest brilliancy	-1443 Feb 10 j 09:05	8°♊11'20	-1.4m		-1438 Apr 04 j 05:07	0°♊	
min. Earth dist.	-1443 Feb 14 j 07:07	6°♊40'18	0.63142 AU	evening set	-1438 May 19 j 20:11	29°♊21'42	
	-1443 Mar 08 j 00:51	30°♊			-1438 May 20 j 20:10	0°♊	
direct	-1443 Mar 22 j 13:12	28°♊36'25		max. Earth dist.	-1438 Jul 03 j 19:29	28°♊00'38	2.67338 AU
	-1443 Apr 06 j 18:37	0°♊					
	-1443 Jun 17 j 05:40	0°♊		conjunction	-1438 Jul 06 j 00:39	29°♊25'17	1°04'25
desc. node	-1443 Jul 07 j 01:15	12°♊00'26		minimum elong	-1438 Jul 05 j 23:45	29°♊23'50	1°04'27
	-1443 Aug 03 j 07:48	0°♊			-1438 Jul 06 j 22:27	0°♊	
	-1443 Sep 14 j 02:08	0°♊		morning rise	-1438 Aug 19 j 23:30	28°♊11'19	
	-1443 Oct 23 j 09:01	0°♊			-1438 Aug 22 j 18:58	0°♊	
	-1443 Nov 30 j 17:45	0°♊			-1438 Oct 07 j 21:59	0°♊	
	-1442 Jan 08 j 08:09	0°♊			-1438 Nov 22 j 04:01	0°♊	
evening set	-1442 Feb 13 j 03:10	27°♊03'48			-1437 Jan 05 j 17:19	0°♊	
	-1442 Feb 17 j 02:17	0°♊			-1437 Feb 19 j 01:19	0°♊	
	-1442 Mar 30 j 15:24	0°♊		desc. node	-1437 Feb 27 j 00:19	5°♊20'55	
					-1437 Apr 05 j 13:03	0°♊	
conjunction	-1442 Apr 13 j 09:02	9°♊36'21	0°-15'-38		-1437 May 29 j 01:25	0°♊	
minimum elong	-1442 Apr 13 j 09:56	9°♊37'54	0°15'38	retrograde	-1437 Jul 08 j 18:22	10°♊04'46	
behind sun begin	-1442 Apr 13 j 06:28	9°♊31'54		min. Earth dist.	-1437 Aug 04 j 11:01	5°♊35'20	0.39832 AU
behind sun end	-1442 Apr 13 j 13:23	9°♊43'54		greatest brilliancy	-1437 Aug 09 j 00:19	4°♊14'13	-2.7m
asc. node	-1442 May 09 j 12:52	27°♊29'52		opposition	-1437 Aug 10 j 15:46	3°♊44'44	-6°-29'00
	-1442 May 13 j 06:04	0°♊			-1437 Aug 25 j 00:37	30°♊	
max. Earth dist.	-1442 May 14 j 07:08	0°♊42'05	2.56528 AU	direct	-1437 Sep 09 j 22:09	28°♊20'08	
morning rise	-1442 Jun 06 j 07:26	15°♊58'34			-1437 Sep 26 j 03:01	0°♊	
	-1442 Jun 27 j 20:53	0°♊			-1437 Dec 04 j 22:02	0°♊	
	-1442 Aug 14 j 07:07	0°♊		asc. node	-1437 Dec 30 j 08:43	14°♊43'40	
	-1442 Oct 02 j 18:47	0°♊			-1436 Jan 24 j 17:08	0°♊	
	-1442 Nov 25 j 15:28	0°♊			-1436 Mar 13 j 10:59	0°♊	
retrograde	-1441 Feb 16 j 05:42	27°♊02'11			-1436 Apr 30 j 18:52	0°♊	
opposition	-1441 Mar 23 j 19:33	19°♊36'10	2°59'43		-1436 Jun 17 j 15:25	0°♊	
greatest brilliancy	-1441 Mar 25 j 03:22	19°♊07'34	-1.9m	evening set	-1436 Jun 26 j 02:51	5°♊22'12	
min. Earth dist.	-1441 Mar 31 j 21:28	16°♊42'33	0.52744 AU	max. Earth dist.	-1436 Jul 26 j 15:11	24°♊54'15	2.64640 AU
direct	-1441 May 01 j 23:41	10°♊31'52			-1436 Aug 03 j 11:57	0°♊	
desc. node	-1441 May 24 j 23:35	13°♊49'43					
	-1441 Jul 02 j 08:22	0°♊		conjunction	-1436 Aug 11 j 04:14	5°♊00'06	1°08'34
	-1441 Aug 19 j 09:41	0°♊		minimum elong	-1436 Aug 11 j 04:45	5°♊00'56	1°08'35
	-1441 Sep 29 j 22:05	0°♊			-1436 Sep 17 j 21:14	0°♊	
	-1441 Nov 08 j 13:35	0°♊		morning rise	-1436 Sep 25 j 16:22	5°♊16'03	
	-1441 Dec 18 j 04:18	0°♊			-1436 Oct 31 j 14:41	0°♊	
	-1440 Jan 27 j 20:25	0°♊			-1436 Dec 12 j 18:59	0°♊	
	-1440 Mar 10 j 05:08	0°♊		desc. node	-1435 Jan 13 j 22:43	23°♊29'55	
asc. node	-1440 Mar 26 j 11:47	11°♊11'10			-1435 Jan 22 j 17:43	0°♊	
evening set	-1440 Apr 07 j 00:42	19°♊00'27			-1435 Mar 04 j 00:21	0°♊	
	-1440 Apr 23 j 10:40	0°♊			-1435 Apr 13 j 13:44	0°♊	
					-1435 May 26 j 07:51	0°♊	
conjunction	-1440 May 28 j 06:51	22°♊52'21	0°34'43		-1435 Jul 16 j 16:27	0°♊	
minimum elong	-1440 May 28 j 05:36	22°♊50'20	0°34'44	retrograde	-1435 Aug 31 j 14:16	12°♊18'42	
	-1440 Jun 08 j 07:12	0°♊		min. Earth dist.	-1435 Oct 01 j 03:54	5°♊53'10	0.51977 AU
max. Earth dist.	-1440 Jun 09 j 23:24	1°♊04'51	2.64619 AU	opposition	-1435 Oct 08 j 15:14	3°♊04'18	-1°-50'-44

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 47

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

greatest brilliancy	-1435 Oct 07 j 22:08	3°Υ20'28	-2.0m			-1430 Oct 13 j 17:30	0°ℳ	
	-1435 Oct 17 j 04:55	30°℞℥		evening set		-1430 Nov 10 j 18:44	21°ℳ34'44	
direct	-1435 Nov 12 j 09:13	25°℥27'13				-1430 Nov 21 j 13:28	0°♂	
asc. node	-1435 Nov 16 j 08:06	25°℥33'19				-1430 Dec 29 j 15:17	0°☾	
	-1435 Dec 10 j 18:34	0°Υ						
	-1434 Feb 15 j 23:04	0°♂		conjunction		-1429 Jan 14 j 22:29	12°☾50'27	-1°-4'-56
	-1434 Apr 09 j 22:11	0°♂		minimum elong		-1429 Jan 14 j 21:22	12°☾48'14	1°04'59
	-1434 May 29 j 15:27	0°☾				-1429 Feb 05 j 21:34	0°≈	
	-1434 Jul 16 j 03:06	0°♂		max. Earth dist.		-1429 Feb 27 j 01:34	16°≈17'24	2.38927 AU
evening set	-1434 Aug 03 j 13:16	12°♂01'59				-1429 Mar 17 j 05:09	0°℥	
max. Earth dist.	-1434 Aug 23 j 00:05	25°♂00'08	2.56769 AU	morning rise		-1429 Mar 24 j 15:41	5°℥32'27	
	-1434 Aug 30 j 09:15	0°♂				-1429 Apr 27 j 07:43	0°Υ	
						-1429 Jun 09 j 18:45	0°♂	
conjunction	-1434 Sep 20 j 11:51	14°♂31'29	0°42'59	asc. node		-1429 Jul 09 j 06:09	19°♂18'40	
minimum elong	-1434 Sep 20 j 13:18	14°♂34'01	0°42'57			-1429 Jul 26 j 04:22	0°♂	
	-1434 Oct 12 j 10:27	0°♂				-1429 Sep 15 j 02:54	0°☾	
morning rise	-1434 Nov 09 j 18:01	20°♂31'32				-1429 Nov 22 j 06:15	0°♂	
	-1434 Nov 22 j 13:21	0°ℳ		retrograde		-1429 Dec 19 j 01:44	3°♂54'35	
desc. node	-1434 Dec 01 j 21:32	6°ℳ58'59				-1428 Jan 12 j 17:55	30°℞☾	
	-1433 Jan 01 j 05:37	0°♂		opposition		-1428 Jan 27 j 03:12	24°☾48'18	4°44'00
	-1433 Feb 09 j 03:20	0°☾		greatest brilliancy		-1428 Jan 27 j 19:27	24°☾32'20	-1.3m
	-1433 Mar 20 j 02:13	0°≈		min. Earth dist.		-1428 Jan 30 j 13:58	23°☾26'57	0.65581 AU
	-1433 Apr 29 j 02:55	0°℥		direct		-1428 Mar 08 j 10:06	14°☾46'40	
	-1433 Jun 10 j 16:38	0°Υ				-1428 May 04 j 06:37	0°♂	
	-1433 Jul 29 j 00:45	0°♂				-1428 Jun 27 j 23:37	0°♂	
asc. node	-1433 Oct 04 j 07:52	24°♂56'42		desc. node		-1428 Jul 23 j 17:31	16°♂38'44	
retrograde	-1433 Oct 10 j 16:20	25°♂12'43				-1428 Aug 12 j 04:30	0°♂	
min. Earth dist.	-1433 Nov 15 j 07:46	16°♂56'16	0.62500 AU			-1428 Sep 22 j 08:31	0°ℳ	
opposition	-1433 Nov 19 j 12:28	15°♂15'23	1°50'02			-1428 Oct 31 j 09:10	0°♂	
greatest brilliancy	-1433 Nov 19 j 01:58	15°♂25'54	-1.5m			-1428 Dec 08 j 13:44	0°☾	
direct	-1433 Dec 27 j 18:12	6°♂15'20				-1427 Jan 16 j 00:01	0°≈	
	-1432 Mar 13 j 06:34	0°♂		evening set		-1427 Jan 18 j 16:08	2°≈03'38	
	-1432 May 07 j 15:02	0°☾				-1427 Feb 24 j 13:23	0°℥	
	-1432 Jun 25 j 21:56	0°♂						
	-1432 Aug 10 j 15:38	0°♂		conjunction		-1427 Mar 22 j 19:21	19°℥13'03	0°-37'-23
evening set	-1432 Sep 15 j 05:13	24°♂44'57		minimum elong		-1427 Mar 22 j 21:33	19°℥17'01	0°37'23
	-1432 Sep 22 j 13:03	0°♂				-1427 Apr 06 j 21:35	0°Υ	
max. Earth dist.	-1432 Sep 30 j 22:07	6°♂03'55	2.44834 AU	max. Earth dist.		-1427 May 01 j 00:32	16°Υ50'16	2.52002 AU
desc. node	-1432 Oct 18 j 20:49	19°♂16'30		morning rise		-1427 May 19 j 15:07	29°Υ30'25	
	-1432 Nov 02 j 04:12	0°ℳ				-1427 May 20 j 08:41	0°♂	
				asc. node		-1427 May 26 j 05:20	3°♂56'00	
conjunction	-1432 Nov 08 j 14:31	4°ℳ52'21	0°-13'-51			-1427 Jul 05 j 00:12	0°♂	
minimum elong	-1432 Nov 08 j 13:37	4°ℳ50'39	0°13'52			-1427 Aug 21 j 21:29	0°☾	
behind sun begin	-1432 Nov 08 j 00:31	4°ℳ25'47				-1427 Oct 11 j 23:45	0°♂	
behind sun end	-1432 Nov 09 j 02:42	5°ℳ15'31				-1427 Dec 12 j 00:37	0°♂	
	-1432 Dec 11 j 05:39	0°♂		retrograde		-1426 Jan 28 j 00:21	10°♂36'11	
greatest brilliancy	-1432 Dec 22 j 01:34	8°♂27'02	1.2m	opposition		-1426 Mar 05 j 21:21	2°♂33'55	3°58'33
morning rise	-1431 Jan 09 j 13:38	22°♂57'29		greatest brilliancy		-1426 Mar 07 j 06:45	2°♂02'41	-1.7m
	-1431 Jan 18 j 12:52	0°☾				-1426 Mar 12 j 18:12	30°℞♂	
	-1431 Feb 25 j 22:39	0°≈		min. Earth dist.		-1426 Mar 12 j 22:42	29°♂55'52	0.57462 AU
	-1431 Apr 06 j 08:19	0°℥		direct		-1426 Apr 15 j 05:31	22°♂57'20	
	-1431 May 17 j 15:47	0°Υ				-1426 May 20 j 10:15	0°♂	
	-1431 Jun 30 j 22:39	0°♂		desc. node		-1426 Jun 10 j 17:25	9°♂14'24	
	-1431 Aug 19 j 12:02	0°♂				-1426 Jul 17 j 04:34	0°♂	
asc. node	-1431 Aug 21 j 06:51	0°♂59'06				-1426 Aug 30 j 05:21	0°ℳ	
	-1431 Nov 05 j 20:23	0°☾				-1426 Oct 09 j 10:32	0°♂	
retrograde	-1431 Nov 13 j 17:19	0°☾22'59				-1426 Nov 17 j 08:45	0°☾	
	-1431 Nov 21 j 08:19	30°℞♂				-1426 Dec 26 j 10:28	0°≈	
opposition	-1431 Dec 23 j 17:22	20°♂38'39	3°55'29			-1425 Feb 04 j 15:14	0°℥	
min. Earth dist.	-1431 Dec 23 j 07:20	20°♂48'42	0.67282 AU			-1425 Mar 18 j 14:08	0°Υ	
greatest brilliancy	-1431 Dec 23 j 13:41	20°♂42'20	-1.2m	evening set		-1425 Mar 19 j 19:57	0°Υ52'02	
direct	-1430 Feb 02 j 03:41	10°♂53'45		asc. node		-1425 Apr 13 j 03:00	17°Υ36'12	
	-1430 Apr 09 j 21:08	0°☾				-1425 May 01 j 12:08	0°♂	
	-1430 Jun 04 j 09:00	0°♂						
	-1430 Jul 21 j 19:55	0°♂		conjunction		-1425 May 12 j 16:48	7°♂26'54	0°17'12
	-1430 Sep 03 j 03:46	0°♂		minimum elong		-1425 May 12 j 16:02	7°♂25'37	0°17'12
desc. node	-1430 Sep 05 j 19:07	1°♂53'58		max. Earth dist.		-1425 May 31 j 21:25	20°♂03'54	2.62081 AU

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 48

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

	-1425 Jun 16 j 04:42	0°♊		opposition	-1420 Sep 18 j 08:09	12°♋57'35	-3°-44'-58
morning rise	-1425 Jul 01 j 04:21	9°♊38'28		direct	-1420 Oct 21 j 08:52	6°♋08'27	
	-1425 Aug 02 j 05:09	0°♋		asc. node	-1420 Dec 03 j 00:12	15°♋45'36	
	-1425 Sep 19 j 06:05	0°♌			-1419 Jan 03 j 04:44	0°♎	
	-1425 Nov 07 j 16:23	0°♍			-1419 Feb 26 j 15:02	0°♏	
	-1425 Dec 30 j 21:24	0°♎			-1419 Apr 18 j 02:31	0°♐	
retrograde	-1424 Mar 23 j 10:48	28°♎03'14			-1419 Jun 05 j 21:29	0°♑	
opposition	-1424 Apr 25 j 12:41	21°♎49'09	0°07'48	evening set	-1419 Jul 19 j 07:20	27°♑34'11	
greatest brilliancy	-1425 Dec 18 j 22:46	23°♍37'11	-3.7m		-1419 Jul 23 j 01:23	0°♌	
desc. node	-1424 Apr 27 j 16:37	21°♎07'26		max. Earth dist.	-1419 Aug 11 j 17:41	12°♌52'49	2.60435 AU
min. Earth dist.	-1424 May 03 j 17:11	19°♎12'31	0.44709 AU				
direct	-1424 May 31 j 13:05	14°♎16'15		conjunction	-1419 Sep 04 j 02:22	28°♌29'43	0°56'43
	-1424 Jul 23 j 05:35	0°♍		minimum elong	-1419 Sep 04 j 03:40	28°♌31'54	0°56'43
	-1424 Sep 10 j 00:24	0°♎			-1419 Sep 06 j 07:43	0°♍	
	-1424 Oct 22 j 07:39	0°♏			-1419 Oct 19 j 14:08	0°♎	
	-1424 Dec 02 j 12:46	0°♐		morning rise	-1419 Oct 21 j 20:04	1°♎35'43	
	-1423 Jan 13 j 08:59	0°♑			-1419 Nov 30 j 01:19	0°♏	
	-1423 Feb 25 j 15:17	0°♒		desc. node	-1419 Dec 18 j 14:10	13°♏46'17	
asc. node	-1423 Feb 28 j 01:32	1°♒38'59			-1418 Jan 09 j 03:10	0°♎	
	-1423 Apr 11 j 12:37	0°♑			-1418 Feb 17 j 10:20	0°♏	
evening set	-1423 May 04 j 01:08	14°♑41'56			-1418 Mar 28 j 18:52	0°♐	
	-1423 May 27 j 18:23	0°♒			-1418 May 08 j 09:01	0°♑	
					-1418 Jun 21 j 06:43	0°♒	
conjunction	-1423 Jun 21 j 10:38	15°♒47'32	0°55'46		-1418 Aug 14 j 21:15	0°♑	
minimum elong	-1423 Jun 21 j 09:23	15°♒45'33	0°55'47	retrograde	-1418 Sep 26 j 02:00	10°♑06'36	
max. Earth dist.	-1423 Jun 24 j 20:53	17°♒58'44	2.66923 AU	asc. node	-1418 Oct 20 j 22:42	5°♑45'22	
	-1423 Jul 13 j 17:30	0°♑		min. Earth dist.	-1418 Oct 29 j 21:22	2°♑28'43	0.58987 AU
morning rise	-1423 Aug 06 j 00:45	14°♑51'01		opposition	-1418 Nov 04 j 11:53	0°♑15'35	0°37'29
	-1423 Aug 29 j 17:57	0°♌		greatest brilliancy	-1418 Nov 04 j 06:48	0°♑20'37	-1.7m
	-1423 Oct 15 j 09:54	0°♍			-1418 Nov 05 j 03:39	30°♒♎	
	-1423 Nov 30 j 17:36	0°♎		direct	-1418 Dec 11 j 12:29	21°♒42'11	
	-1422 Jan 16 j 04:52	0°♏			-1417 Jan 20 j 23:28	0°♑	
	-1422 Mar 05 j 04:46	0°♎			-1417 Mar 25 j 15:00	0°♒	
desc. node	-1422 Mar 15 j 15:49	6°♎12'17			-1417 May 16 j 21:31	0°♑	
	-1422 Apr 30 j 22:35	0°♏			-1417 Jul 04 j 06:43	0°♌	
retrograde	-1422 Jun 10 j 01:22	9°♏10'50			-1417 Aug 18 j 18:13	0°♍	
min. Earth dist.	-1422 Jul 08 j 19:00	4°♏28'57	0.37636 AU	evening set	-1417 Aug 29 j 04:36	7°♍08'29	
opposition	-1422 Jul 10 j 15:39	3°♏59'10	-6°-34'-16	max. Earth dist.	-1417 Sep 13 j 13:41	17°♍50'39	2.49815 AU
greatest brilliancy	-1422 Jul 10 j 03:27	4°♏07'19	-2.9m		-1417 Sep 30 j 16:08	0°♎	
	-1422 Jul 28 j 03:22	30°♒♎					
direct	-1422 Aug 09 j 08:19	29°♎02'23		conjunction	-1417 Oct 19 j 08:39	13°♎34'29	0°11'18
	-1422 Aug 21 j 13:02	0°♏		minimum elong	-1417 Oct 19 j 09:15	13°♎35'35	0°11'16
	-1422 Oct 30 j 18:49	0°♐		behind sun begin	-1417 Oct 18 j 16:40	13°♎05'10	
	-1422 Dec 18 j 14:10	0°♑		behind sun end	-1417 Oct 20 j 01:49	14°♎06'01	
asc. node	-1421 Jan 16 j 01:11	18°♑10'29		desc. node	-1417 Nov 05 j 12:49	26°♎18'24	
	-1421 Feb 03 j 12:08	0°♒			-1417 Nov 10 j 11:03	0°♏	
	-1421 Mar 22 j 13:35	0°♑		morning rise	-1417 Dec 14 j 21:23	26°♏15'36	
	-1421 May 09 j 01:12	0°♒			-1417 Dec 19 j 17:27	0°♎	
evening set	-1421 Jun 12 j 11:35	21°♒44'10			-1416 Jan 27 j 05:14	0°♏	
	-1421 Jun 25 j 12:29	0°♑			-1416 Mar 05 j 18:42	0°♐	
max. Earth dist.	-1421 Jul 18 j 03:43	14°♑25'55	2.66327 AU		-1416 Apr 14 j 07:47	0°♑	
					-1416 May 25 j 21:28	0°♒	
conjunction	-1421 Jul 28 j 15:59	21°♑10'46	1°10'14		-1416 Jul 09 j 23:54	0°♑	
minimum elong	-1421 Jul 28 j 15:54	21°♑10'38	1°10'16		-1416 Sep 01 j 02:16	0°♒	
	-1421 Aug 11 j 07:39	0°♌		asc. node	-1416 Sep 06 j 22:33	2°♒44'56	
morning rise	-1421 Sep 11 j 13:22	20°♌27'11		retrograde	-1416 Oct 31 j 08:08	17°♒21'24	
	-1421 Sep 25 j 22:06	0°♍		min. Earth dist.	-1416 Dec 08 j 11:42	8°♒14'43	0.66172 AU
	-1421 Nov 09 j 02:43	0°♎		opposition	-1416 Dec 10 j 09:59	7°♒28'09	3°16'30
	-1421 Dec 21 j 23:33	0°♏		greatest brilliancy	-1416 Dec 10 j 01:09	7°♒37'02	-1.3m
desc. node	-1420 Jan 31 j 15:14	29°♏09'08			-1415 Jan 01 j 10:35	30°♒♑	
	-1420 Feb 01 j 19:22	0°♎		direct	-1415 Jan 19 j 03:19	27°♑57'23	
	-1420 Mar 14 j 04:17	0°♏			-1415 Feb 07 j 05:50	0°♒	
	-1420 Apr 25 j 09:17	0°♐			-1415 Apr 21 j 22:10	0°♑	
	-1420 Jun 11 j 06:45	0°♑			-1415 Jun 12 j 22:24	0°♌	
retrograde	-1420 Aug 12 j 19:41	21°♑21'51			-1415 Jul 29 j 12:12	0°♍	
min. Earth dist.	-1420 Sep 10 j 05:23	15°♑49'13	0.46917 AU		-1415 Sep 10 j 14:12	0°♎	
greatest brilliancy	-1420 Sep 16 j 22:00	13°♑27'52	-2.3m	desc. node	-1415 Sep 22 j 12:21	8°♎39'18	

Planetary Phenomena of Mars from -1900 through -1400 (UT), Astrodienst AG 7-Dez-2017 14:43, page 49

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

evening set	-1415 Oct 17 j 15:53	27° Ω 21'54			-1410 Jun 23 j 03:28	0° Π	
	-1415 Oct 21 j 03:28	0° \mathbb{M}			-1410 Aug 09 j 08:34	0° \mathfrak{S}	
max. Earth dist.	-1415 Nov 25 j 18:13	27° \mathbb{M} 26'41	2.37917 AU		-1410 Sep 27 j 04:29	0° Ω	
	-1415 Nov 29 j 00:40	0° \mathfrak{A}			-1410 Nov 17 j 21:46	0° \mathfrak{M}	
					-1409 Jan 20 j 06:39	0° Ω	
conjunction	-1415 Dec 17 j 19:40	14° \mathfrak{A} 45'29	0°-51'-55	retrograde	-1409 Feb 28 j 06:52	7° Ω 43'49	
minimum elong	-1415 Dec 17 j 16:47	14° \mathfrak{A} 39'48	0°51'56	opposition	-1409 Apr 04 j 01:35	0° Ω 41'05	2°09'54
	-1414 Jan 06 j 03:33	0° \mathfrak{C}		greatest brilliancy	-1409 Apr 05 j 03:20	0° Ω 18'40	-2.1m
	-1414 Feb 13 j 10:08	0° \approx			-1409 Apr 06 j 00:43	30° \mathfrak{M}	
morning rise	-1414 Feb 24 j 17:17	8° \approx 44'05		min. Earth dist.	-1409 Apr 12 j 12:00	27° \mathfrak{M} 45'54	0.49909 AU
	-1414 Mar 24 j 17:14	0° \mathfrak{H}		direct	-1409 May 12 j 07:49	22° \mathfrak{M} 03'03	
	-1414 May 04 j 19:38	0° \mathfrak{Y}		desc. node	-1409 May 15 j 08:35	22° \mathfrak{M} 06'48	
	-1414 Jun 17 j 10:25	0° \mathfrak{B}			-1409 Jun 17 j 19:38	0° Ω	
asc. node	-1414 Jul 25 j 21:25	24° \mathfrak{B} 42'27			-1409 Aug 11 j 11:52	0° \mathbb{M}	
	-1414 Aug 03 j 12:51	0° Π			-1409 Sep 23 j 09:52	0° \mathfrak{A}	
	-1414 Sep 26 j 10:59	0° \mathfrak{S}			-1409 Nov 02 j 16:35	0° \mathfrak{C}	
retrograde	-1414 Dec 05 j 00:12	20° \mathfrak{S} 58'08			-1409 Dec 12 j 17:15	0° \approx	
opposition	-1413 Jan 13 j 13:28	11° \mathfrak{S} 34'21	4°34'16		-1408 Jan 22 j 16:55	0° \mathfrak{H}	
greatest brilliancy	-1413 Jan 13 j 21:11	11° \mathfrak{S} 26'41	-1.2m		-1408 Mar 05 j 07:25	0° \mathfrak{Y}	
min. Earth dist.	-1413 Jan 15 j 11:38	10° \mathfrak{S} 48'30	0.67044 AU	asc. node	-1408 Mar 16 j 18:02	7° \mathfrak{Y} 50'39	
direct	-1413 Feb 23 j 16:28	1° \mathfrak{S} 35'44		evening set	-1408 Apr 17 j 05:03	28° \mathfrak{Y} 59'58	
	-1413 May 18 j 20:03	0° Ω			-1408 Apr 18 j 17:15	0° \mathfrak{B}	
	-1413 Jul 08 j 05:45	0° \mathfrak{M}			-1408 Jun 03 j 15:55	0° Π	
desc. node	-1413 Aug 10 j 11:12	22° \mathfrak{M} 17'01					
	-1413 Aug 21 j 10:36	0° Ω		conjunction	-1408 Jun 06 j 07:16	1° Π 42'02	0°43'27
	-1413 Oct 01 j 06:45	0° \mathbb{M}		minimum elong	-1408 Jun 06 j 05:56	1° Π 39'53	0°43'27
	-1413 Nov 09 j 04:12	0° \mathfrak{A}		max. Earth dist.	-1408 Jun 15 j 13:02	7° Π 38'23	2.65662 AU
	-1413 Dec 17 j 06:21	0° \mathfrak{C}			-1408 Jul 20 j 13:38	0° \mathfrak{S}	
evening set	-1413 Dec 23 j 03:18	4° \mathfrak{C} 37'43		morning rise	-1408 Jul 23 j 00:04	1° \mathfrak{S} 32'54	
greatest brilliancy	-1412 Jan 02 j 22:36	13° \mathfrak{C} 07'26	1.2m		-1408 Sep 05 j 20:34	0° Ω	
	-1412 Jan 24 j 13:43	0° \approx			-1408 Oct 23 j 06:48	0° \mathfrak{M}	
					-1408 Dec 10 j 05:28	0° Ω	
conjunction	-1412 Feb 27 j 08:12	25° \approx 47'00	0°-55'-58		-1407 Jan 29 j 05:13	0° \mathbb{M}	
minimum elong	-1412 Feb 27 j 10:47	25° \approx 51'50	0°55'59		-1407 Mar 30 j 03:35	0° \mathfrak{A}	
	-1412 Mar 03 j 23:22	0° \mathfrak{H}		desc. node	-1407 Apr 01 j 08:34	0° \mathfrak{A} 49'40	
max. Earth dist.	-1412 Apr 14 j 11:11	0° \mathfrak{Y} 13'19	2.46886 AU	retrograde	-1407 May 08 j 18:38	8° \mathfrak{A} 28'56	
	-1412 Apr 14 j 03:41	0° \mathfrak{Y}		opposition	-1407 Jun 08 j 07:46	3° \mathfrak{A} 24'00	-4°-25'-49
morning rise	-1412 Apr 29 j 20:11	11° \mathfrak{Y} 02'08		greatest brilliancy	-1407 Jun 09 j 00:01	3° \mathfrak{A} 12'53	-2.8m
	-1412 May 27 j 12:43	0° \mathfrak{B}		min. Earth dist.	-1407 Jun 11 j 20:17	2° \mathfrak{A} 26'18	0.38461 AU
asc. node	-1412 Jun 11 j 19:46	10° \mathfrak{B} 12'21			-1407 Jun 21 j 15:32	30° \mathfrak{M}	
	-1412 Jul 12 j 07:30	0° Π		direct	-1407 Jul 09 j 17:26	27° \mathbb{M} 53'59	
	-1412 Aug 29 j 22:23	0° \mathfrak{S}			-1407 Jul 27 j 13:00	0° \mathfrak{A}	
	-1412 Oct 22 j 18:15	0° Ω			-1407 Sep 29 j 14:01	0° \mathfrak{C}	
retrograde	-1411 Jan 11 j 00:37	25° Ω 48'17			-1407 Nov 14 j 20:36	0° \approx	
opposition	-1411 Feb 17 j 22:16	17° Ω 16'56	4°30'31		-1407 Dec 29 j 08:47	0° \mathfrak{H}	
greatest brilliancy	-1411 Feb 19 j 02:45	16° Ω 49'36	-1.5m	asc. node	-1406 Feb 01 j 16:21	22° \mathfrak{H} 58'13	
min. Earth dist.	-1411 Feb 23 j 15:29	15° Ω 05'25	0.61376 AU		-1406 Feb 12 j 07:01	0° \mathfrak{Y}	
direct	-1411 Mar 30 j 21:56	7° Ω 23'19			-1406 Mar 30 j 06:16	0° \mathfrak{B}	
	-1411 Jun 09 j 00:06	0° \mathfrak{M}			-1406 May 16 j 03:18	0° Π	
desc. node	-1411 Jun 27 j 09:30	10° \mathfrak{M} 25'02		evening set	-1406 May 28 j 13:51	7° Π 54'27	
	-1411 Jul 28 j 04:52	0° Ω			-1406 Jul 02 j 08:08	0° \mathfrak{S}	
	-1411 Sep 08 j 14:10	0° \mathbb{M}		max. Earth dist.	-1406 Jul 09 j 01:47	4° \mathfrak{S} 17'24	2.67200 AU
	-1411 Oct 18 j 03:40	0° \mathfrak{A}					
	-1411 Nov 25 j 16:12	0° \mathfrak{C}		conjunction	-1406 Jul 14 j 07:06	7° \mathfrak{S} 37'13	1°07'42
	-1410 Jan 03 j 09:37	0° \approx		minimum elong	-1406 Jul 14 j 06:28	7° \mathfrak{S} 36'12	1°07'44
	-1410 Feb 12 j 06:19	0° \mathfrak{H}			-1406 Aug 18 j 03:51	0° Ω	
evening set	-1410 Feb 26 j 08:31	10° \mathfrak{H} 18'50		morning rise	-1406 Aug 28 j 02:20	6° Ω 26'13	
	-1410 Mar 25 j 21:29	0° \mathfrak{Y}			-1406 Oct 03 j 01:42	0° \mathfrak{M}	
					-1406 Nov 16 j 21:27	0° Ω	
conjunction	-1410 Apr 24 j 13:13	20° \mathfrak{Y} 31'34	0°-3'-10		-1406 Dec 30 j 17:35	0° \mathbb{M}	
minimum elong	-1410 Apr 24 j 13:23	20° \mathfrak{Y} 31'50	0°03'10		-1405 Feb 11 j 22:19	0° \mathfrak{A}	
behind sun begin	-1410 Apr 23 j 15:03	19° \mathfrak{Y} 53'49		desc. node	-1405 Feb 17 j 07:26	3° \mathfrak{A} 44'48	
behind sun end	-1410 Apr 25 j 11:43	21° \mathfrak{Y} 09'49			-1405 Mar 27 j 07:50	0° \mathfrak{C}	
asc. node	-1410 Apr 29 j 19:17	24° \mathfrak{Y} 05'36			-1405 May 12 j 15:59	0° \approx	
	-1410 May 08 j 13:26	0° \mathfrak{B}		retrograde	-1405 Jul 22 j 21:23	26° \approx 25'45	
max. Earth dist.	-1410 May 21 j 03:32	8° \mathfrak{B} 24'15	2.58700 AU	min. Earth dist.	-1405 Aug 18 j 17:08	21° \approx 40'59	0.42056 AU
morning rise	-1410 Jun 15 j 16:48	25° \mathfrak{B} 10'42		greatest brilliancy	-1405 Aug 24 j 10:06	19° \approx 52'19	-2.6m

Attention, astronomical year style is used: The year -1899 in astronomical counting style is the year 1900 BCE in historical counting style.

opposition	-1405 Aug 26 j 05:24	19° \approx 17'43	-5°-40'-11	conjunction	-1400 Nov 21 j 20:21	18° \mathbb{M} 37'39	0°-28'-40
direct	-1405 Sep 26 j 08:07	13° \approx 24'08		minimum elong	-1400 Nov 21 j 18:26	18° \mathbb{M} 33'56	0°28'40
	-1405 Nov 23 j 07:40	0° \mathbb{H}			-1400 Dec 06 j 12:00	0° \mathbb{J}	
asc. node	-1405 Dec 20 j 15:56	14° \mathbb{H} 04'36					
	-1404 Jan 17 j 17:21	0° \mathbb{Y}					
	-1404 Mar 07 j 21:00	0° \mathbb{B}					
	-1404 Apr 25 j 19:44	0° \mathbb{II}					
	-1404 Jun 12 j 23:15	0° \mathbb{S}					
evening set	-1404 Jul 04 j 11:34	13° \mathbb{S} 37'46					
	-1404 Jul 29 j 22:22	0° \mathbb{Q}					
max. Earth dist.	-1404 Aug 01 j 07:19	1° \mathbb{Q} 32'33	2.63361 AU				
conjunction	-1404 Aug 19 j 16:05	13° \mathbb{Q} 34'33	1°05'35				
minimum elong	-1404 Aug 19 j 16:55	13° \mathbb{Q} 35'55	1°05'36				
	-1404 Sep 13 j 06:38	0° \mathbb{M}					
morning rise	-1404 Oct 04 j 18:39	14° \mathbb{M} 39'21					
	-1404 Oct 26 j 20:04	0° \mathbb{A}					
	-1404 Dec 07 j 17:40	0° \mathbb{M}					
desc. node	-1403 Jan 04 j 07:06	20° \mathbb{M} 17'00					
	-1403 Jan 17 j 07:58	0° \mathbb{J}					
	-1403 Feb 26 j 04:22	0° \mathbb{S}					
	-1403 Apr 07 j 04:16	0° \approx					
	-1403 May 18 j 19:45	0° \mathbb{H}					
	-1403 Jul 04 j 18:48	0° \mathbb{Y}					
retrograde	-1403 Sep 10 j 07:25	23° \mathbb{Y} 18'56					
min. Earth dist.	-1403 Oct 12 j 02:23	16° \mathbb{Y} 25'32	0.54670 AU				
opposition	-1403 Oct 18 j 23:14	13° \mathbb{Y} 46'28	0°-51'-36				
greatest brilliancy	-1403 Oct 18 j 15:32	13° \mathbb{Y} 53'54	-1.9m				
asc. node	-1403 Nov 06 j 14:41	7° \mathbb{Y} 43'52					
direct	-1403 Nov 23 j 13:39	5° \mathbb{Y} 46'53					
	-1402 Feb 07 j 20:39	0° \mathbb{B}					
	-1402 Apr 04 j 04:24	0° \mathbb{II}					
	-1402 May 24 j 15:50	0° \mathbb{S}					
	-1402 Jul 11 j 10:45	0° \mathbb{Q}					
evening set	-1402 Aug 12 j 13:06	21° \mathbb{Q} 04'08					
	-1402 Aug 25 j 19:06	0° \mathbb{M}					
max. Earth dist.	-1402 Aug 30 j 04:40	2° \mathbb{M} 59'46	2.54478 AU				
conjunction	-1402 Sep 30 j 09:35	24° \mathbb{M} 42'57	0°32'49				
minimum elong	-1402 Sep 30 j 10:55	24° \mathbb{M} 45'20	0°32'47				
	-1402 Oct 07 j 19:38	0° \mathbb{A}					
	-1402 Nov 17 j 19:53	0° \mathbb{M}					
morning rise	-1402 Nov 21 j 12:38	2° \mathbb{M} 45'57					
desc. node	-1402 Nov 22 j 06:49	3° \mathbb{M} 20'02					
	-1402 Dec 27 j 08:34	0° \mathbb{J}					
	-1401 Feb 04 j 02:07	0° \mathbb{S}					
	-1401 Mar 14 j 20:32	0° \approx					
	-1401 Apr 23 j 15:13	0° \mathbb{H}					
	-1401 Jun 04 j 16:14	0° \mathbb{Y}					
	-1401 Jul 21 j 07:22	0° \mathbb{B}					
	-1401 Sep 23 j 09:34	0° \mathbb{II}					
asc. node	-1401 Sep 24 j 13:06	0° \mathbb{II} 18'59					
retrograde	-1401 Oct 18 j 17:23	3° \mathbb{II} 48'45					
	-1401 Nov 11 j 06:22	30° \mathbb{R} \mathbb{B}					
min. Earth dist.	-1401 Nov 24 j 07:30	25° \mathbb{B} 13'13	0.64082 AU				
opposition	-1401 Nov 27 j 17:16	23° \mathbb{B} 51'02	2°25'44				
greatest brilliancy	-1401 Nov 27 j 06:08	24° \mathbb{B} 02'14	-1.4m				
direct	-1400 Jan 05 j 13:09	14° \mathbb{B} 38'43					
	-1400 Mar 04 j 03:15	0° \mathbb{II}					
	-1400 May 01 j 18:19	0° \mathbb{S}					
	-1400 Jun 20 j 20:53	0° \mathbb{Q}					
	-1400 Aug 05 j 21:26	0° \mathbb{M}					
	-1400 Sep 17 j 20:53	0° \mathbb{A}					
evening set	-1400 Sep 26 j 06:29	6° \mathbb{A} 04'51					
desc. node	-1400 Oct 09 j 05:15	15° \mathbb{A} 34'56					
max. Earth dist.	-1400 Oct 14 j 13:35	19° \mathbb{A} 33'05	2.42103 AU				
	-1400 Oct 28 j 11:45	0° \mathbb{M}					

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 1

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

conjunction	-1400 Nov 21 j 20:21	18° \mathbb{M} 37'39	0°-28'-40		-1395 Aug 16 j 18:10	0° \mathfrak{S}	
minimum elong	-1400 Nov 21 j 18:26	18° \mathbb{M} 33'56	0°28'40		-1395 Oct 05 j 18:54	0° Ω	
	-1400 Dec 06 j 12:00	0° \mathfrak{A}			-1395 Nov 30 j 18:06	0° \mathfrak{M}	
	-1399 Jan 13 j 17:34	0° \mathfrak{Z}		retrograde	-1394 Feb 07 j 15:01	20° \mathfrak{M} 11'42	
morning rise	-1399 Jan 25 j 20:37	9° \mathfrak{Z} 31'50		opposition	-1394 Mar 15 j 19:45	12° \mathfrak{M} 28'21	3°28'09
	-1399 Feb 21 j 01:43	0° \approx		greatest brilliancy	-1394 Mar 17 j 05:02	11° \mathfrak{M} 57'48	-1.8m
	-1399 Apr 01 j 09:32	0° \mathfrak{H}		min. Earth dist.	-1394 Mar 23 j 11:53	9° \mathfrak{M} 40'05	0.54942 AU
	-1399 May 12 j 13:24	0° \mathfrak{Y}		direct	-1394 Apr 24 j 13:59	3° \mathfrak{M} 07'33	
	-1399 Jun 25 j 11:25	0° \mathfrak{B}		desc. node	-1394 Jun 01 j 01:11	11° \mathfrak{M} 10'08	
asc. node	-1399 Aug 11 j 13:11	29° \mathfrak{B} 17'14			-1394 Jul 08 j 19:18	0° $\underline{\mathfrak{A}}$	
	-1399 Aug 12 j 18:38	0° \mathbb{I}			-1394 Aug 23 j 18:02	0° \mathbb{M}	
	-1399 Oct 12 j 16:07	0° \mathfrak{S}			-1394 Oct 03 j 15:34	0° \mathfrak{A}	
retrograde	-1399 Nov 21 j 10:29	8° \mathfrak{S} 12'11			-1394 Nov 11 j 22:29	0° \mathfrak{Z}	
	-1399 Dec 27 j 17:20	30° \mathbb{R} \mathbb{I}			-1394 Dec 21 j 06:13	0° \approx	
opposition	-1399 Dec 31 j 07:37	28° \mathbb{I} 34'05	4°13'01		-1393 Jan 30 j 15:55	0° \mathfrak{H}	
greatest brilliancy	-1399 Dec 31 j 07:35	28° \mathbb{I} 34'07	-1.2m		-1393 Mar 13 j 18:38	0° \mathfrak{Y}	
min. Earth dist.	-1399 Dec 31 j 17:14	28° \mathbb{I} 24'27	0.67477 AU	evening set	-1393 Mar 30 j 23:19	11° \mathfrak{Y} 52'04	
direct	-1398 Feb 10 j 01:08	18° \mathbb{I} 43'10		asc. node	-1393 Apr 03 j 09:55	14° \mathfrak{Y} 13'07	
	-1398 Mar 30 j 17:40	0° \mathfrak{S}			-1393 Apr 26 j 19:30	0° \mathfrak{B}	
	-1398 May 29 j 07:47	0° Ω					
	-1398 Jul 16 j 15:16	0° \mathfrak{M}		conjunction	-1393 May 22 j 07:41	16° \mathfrak{B} 51'03	0°27'42
desc. node	-1398 Aug 27 j 03:25	28° \mathfrak{M} 29'32		minimum elong	-1393 May 22 j 06:35	16° \mathfrak{B} 49'15	0°27'43
	-1398 Aug 29 j 06:04	0° $\underline{\mathfrak{A}}$		max. Earth dist.	-1393 Jun 06 j 19:16	26° \mathfrak{B} 55'55	2.63581 AU
	-1398 Oct 08 j 22:01	0° \mathbb{M}			-1393 Jun 11 j 13:04	0° \mathbb{I}	
	-1398 Nov 16 j 18:32	0° \mathfrak{A}		morning rise	-1393 Jul 09 j 15:29	18° \mathbb{I} 01'51	
evening set	-1398 Nov 25 j 13:30	6° \mathfrak{A} 54'08			-1393 Jul 28 j 11:37	0° \mathfrak{S}	
	-1398 Dec 24 j 20:10	0° \mathfrak{Z}			-1393 Sep 14 j 04:32	0° Ω	
					-1393 Nov 01 j 17:21	0° \mathfrak{M}	
conjunction	-1397 Jan 31 j 00:19	29° \mathfrak{Z} 09'29	-1°-5'-40		-1393 Dec 22 j 08:13	0° $\underline{\mathfrak{A}}$	
minimum elong	-1397 Jan 31 j 00:59	29° \mathfrak{Z} 10'46	1°05'43		-1392 Feb 19 j 09:19	0° \mathbb{M}	
	-1397 Feb 01 j 02:21	0° \approx		retrograde	-1392 Apr 08 j 03:57	11° \mathbb{M} 42'12	
	-1397 Mar 12 j 10:01	0° \mathfrak{H}		desc. node	-1392 Apr 18 j 00:26	11° \mathbb{M} 05'46	
max. Earth dist.	-1397 Mar 21 j 23:07	7° \mathfrak{H} 06'13	2.41591 AU	opposition	-1392 May 10 j 02:32	5° \mathbb{M} 57'05	-1°-24'-12
morning rise	-1397 Apr 08 j 00:46	19° \mathfrak{H} 36'14		greatest brilliancy	-1392 May 10 j 15:53	5° \mathbb{M} 47'00	-2.6m
	-1397 Apr 22 j 12:08	0° \mathfrak{Y}		min. Earth dist.	-1392 May 17 j 08:01	3° \mathbb{M} 46'14	0.42018 AU
	-1397 Jun 04 j 20:58	0° \mathfrak{B}			-1392 Jun 02 j 09:53	30° \mathbb{R} $\underline{\mathfrak{A}}$	
asc. node	-1397 Jun 29 j 12:53	16° \mathfrak{B} 18'11		direct	-1392 Jun 13 j 14:02	29° $\underline{\mathfrak{A}}$ 09'03	
	-1397 Jul 20 j 22:32	0° \mathbb{I}			-1392 Jun 24 j 16:58	0° \mathbb{M}	
	-1397 Sep 08 j 17:49	0° \mathfrak{S}			-1392 Aug 31 j 05:04	0° \mathfrak{A}	
	-1397 Nov 07 j 05:16	0° Ω			-1392 Oct 14 j 22:38	0° \mathfrak{Z}	
retrograde	-1397 Dec 27 j 12:02	11° Ω 59'17			-1392 Nov 26 j 06:14	0° \approx	
opposition	-1396 Feb 04 j 04:36	3° Ω 04'07	4°43'19		-1391 Jan 07 j 18:53	0° \mathfrak{H}	
greatest brilliancy	-1396 Feb 05 j 01:25	2° Ω 43'47	-1.4m	asc. node	-1391 Feb 18 j 08:43	28° \mathfrak{H} 33'19	
min. Earth dist.	-1396 Feb 08 j 10:44	1° Ω 24'27	0.64362 AU		-1391 Feb 20 j 12:02	0° \mathfrak{Y}	
	-1396 Feb 12 j 03:03	30° \mathbb{R} \mathfrak{S}			-1391 Apr 06 j 16:42	0° \mathfrak{B}	
direct	-1396 Mar 16 j 10:45	23° \mathfrak{S} 03'18		evening set	-1391 May 13 j 04:10	23° \mathfrak{B} 37'35	
	-1396 Apr 21 j 13:25	0° Ω			-1391 May 23 j 02:37	0° \mathbb{I}	
	-1396 Jun 21 j 09:19	0° \mathfrak{M}					
desc. node	-1396 Jul 14 j 02:31	14° \mathfrak{M} 11'28		conjunction	-1391 Jun 29 j 20:09	24° \mathbb{I} 04'46	1°01'14
	-1396 Aug 06 j 15:30	0° $\underline{\mathfrak{A}}$		minimum elong	-1391 Jun 29 j 19:05	24° \mathbb{I} 03'04	1°01'15
	-1396 Sep 17 j 04:14	0° \mathbb{M}		max. Earth dist.	-1391 Jun 30 j 04:34	24° \mathbb{I} 18'10	2.67260 AU
	-1396 Oct 26 j 08:47	0° \mathfrak{A}			-1391 Jul 09 j 03:09	0° \mathfrak{S}	
	-1396 Dec 03 j 15:22	0° \mathfrak{Z}		morning rise	-1391 Aug 14 j 00:20	22° \mathfrak{S} 54'48	
	-1395 Jan 11 j 03:10	0° \approx			-1391 Aug 25 j 01:29	0° Ω	
evening set	-1395 Feb 02 j 08:36	16° \approx 58'17			-1391 Oct 10 j 10:10	0° \mathfrak{M}	
	-1395 Feb 19 j 18:05	0° \mathfrak{H}			-1391 Nov 25 j 03:04	0° $\underline{\mathfrak{A}}$	
	-1395 Apr 02 j 03:32	0° \mathfrak{Y}			-1390 Jan 09 j 10:09	0° \mathbb{M}	
					-1390 Feb 24 j 00:25	0° \mathfrak{A}	
conjunction	-1395 Apr 04 j 08:49	1° \mathfrak{Y} 34'04	0°-25'00	desc. node	-1390 Mar 06 j 01:09	6° \mathfrak{A} 28'29	
minimum elong	-1395 Apr 04 j 10:17	1° \mathfrak{Y} 36'41	0°25'00		-1390 Apr 13 j 06:23	0° \mathfrak{Z}	
max. Earth dist.	-1395 May 09 j 01:07	25° \mathfrak{Y} 32'55	2.54584 AU	retrograde	-1390 Jun 26 j 19:17	27° \mathfrak{Z} 16'31	
	-1395 May 15 j 15:14	0° \mathfrak{B}		min. Earth dist.	-1390 Jul 23 j 23:59	22° \mathfrak{Z} 49'27	0.38497 AU
asc. node	-1395 May 16 j 10:51	0° \mathfrak{B} 33'01		greatest brilliancy	-1390 Jul 27 j 07:13	21° \mathfrak{Z} 53'44	-2.8m
morning rise	-1395 May 29 j 22:23	9° \mathfrak{B} 33'32		opposition	-1390 Jul 28 j 13:07	21° \mathfrak{Z} 32'37	-6°-47'-42
	-1395 Jun 30 j 04:48	0° \mathbb{I}		direct	-1390 Aug 27 j 08:51	16° \mathfrak{Z} 26'16	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 2

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1390 Oct 16 j 17:50	0°♊		minimum elong	-1385 Oct 31 j 00:51	25°♊40'55	0°02'49
	-1390 Dec 10 j 15:13	0°♋		behind sun begin	-1385 Oct 30 j 01:34	24°♊57'21	
asc. node	-1389 Jan 06 j 06:44	16°♋15'26		behind sun end	-1385 Nov 01 j 00:09	26°♊24'32	
	-1389 Jan 28 j 09:05	0°♌			-1385 Nov 05 j 18:50	0°♌	
	-1389 Mar 17 j 06:52	0°♍			-1385 Dec 14 j 23:01	0°♍	
evening set	-1389 May 04 j 04:54	0°♎		morning rise	-1385 Dec 29 j 11:54	11°♍19'31	
	-1389 Jun 20 j 21:29	0°♏00'17			-1384 Jan 22 j 08:15	0°♎	
	-1389 Jun 20 j 21:18	0°♏			-1384 Feb 29 j 19:04	0°♏	
max. Earth dist.	-1389 Jul 23 j 14:21	20°♏52'03	2.65499 AU	greatest brilliancy	-1384 Mar 01 j 02:27	0°♏14'17	1.2m
					-1384 Apr 09 j 05:13	0°♋	
conjunction	-1389 Aug 05 j 22:44	29°♏29'12	1°09'46		-1384 May 20 j 13:28	0°♌	
minimum elong	-1389 Aug 05 j 22:59	29°♏29'37	1°09'48		-1384 Jul 04 j 01:20	0°♍	
	-1389 Aug 06 j 17:43	0°♎			-1384 Aug 23 j 14:42	0°♎	
morning rise	-1389 Sep 20 j 02:16	29°♎13'43		asc. node	-1384 Aug 28 j 04:48	2°♎24'38	
	-1389 Sep 21 j 05:53	0°♏		retrograde	-1384 Nov 08 j 01:13	25°♎19'56	
	-1389 Nov 04 j 04:59	0°♐		min. Earth dist.	-1384 Dec 16 j 23:57	15°♎57'50	0.66910 AU
	-1389 Dec 16 j 16:50	0°♑		opposition	-1384 Dec 18 j 02:37	15°♎31'02	3°40'37
desc. node	-1388 Jan 21 j 23:56	26°♑18'41		greatest brilliancy	-1384 Dec 17 j 20:17	15°♎37'24	-1.3m
	-1388 Jan 27 j 00:46	0°♒		direct	-1383 Jan 27 j 06:01	5°♎52'08	
	-1388 Mar 07 j 17:35	0°♓			-1383 Apr 14 j 12:20	0°♏	
	-1388 Apr 17 j 20:32	0°♑			-1383 Jun 07 j 09:39	0°♎	
	-1388 May 31 j 18:46	0°♋			-1383 Jul 24 j 12:33	0°♏	
	-1388 Jul 29 j 22:20	0°♌			-1383 Sep 05 j 19:22	0°♐	
retrograde	-1388 Aug 23 j 19:40	4°♌05'32		desc. node	-1383 Sep 12 j 20:17	5°♐04'52	
	-1388 Sep 16 j 16:42	30°♋			-1383 Oct 16 j 09:55	0°♑	
min. Earth dist.	-1388 Sep 22 j 10:00	28°♋03'09	0.49718 AU	evening set	-1383 Oct 30 j 22:17	11°♑04'52	
greatest brilliancy	-1388 Sep 29 j 05:21	25°♋33'08	-2.1m		-1383 Nov 24 j 07:08	0°♒	
opposition	-1388 Sep 30 j 06:01	25°♋10'20	-2°-38'-10		-1382 Jan 01 j 09:27	0°♓	
direct	-1388 Nov 03 j 05:32	17°♋53'35					
asc. node	-1388 Nov 23 j 05:51	20°♋17'37		conjunction	-1382 Jan 02 j 11:25	0°♓51'15	-1°00'-58
	-1388 Dec 22 j 09:39	0°♌		minimum elong	-1382 Jan 02 j 09:12	0°♓46'51	1°01'00
	-1387 Feb 19 j 23:16	0°♍		max. Earth dist.	-1382 Jan 22 j 16:23	16°♓45'36	2.37473 AU
	-1387 Apr 12 j 17:44	0°♎			-1382 Feb 08 j 15:15	0°♏	
	-1387 Jun 01 j 01:16	0°♏		morning rise	-1382 Mar 12 j 19:27	24°♏40'06	
	-1387 Jul 18 j 10:21	0°♎			-1382 Mar 19 j 21:36	0°♋	
evening set	-1387 Jul 27 j 22:55	6°♎11'33			-1382 Apr 29 j 22:34	0°♌	
max. Earth dist.	-1387 Aug 18 j 02:31	20°♎09'24	2.58503 AU		-1382 Jun 12 j 09:14	0°♍	
	-1387 Sep 01 j 17:32	0°♏		asc. node	-1382 Jul 16 j 03:46	21°♍59'33	
					-1382 Jul 28 j 23:02	0°♎	
conjunction	-1387 Sep 13 j 07:13	7°♏53'47	0°49'23		-1382 Sep 18 j 19:07	0°♏	
minimum elong	-1387 Sep 13 j 08:38	7°♏56'14	0°49'23	retrograde	-1382 Dec 13 j 00:28	28°♏48'45	
	-1387 Oct 14 j 22:06	0°♐		opposition	-1381 Jan 21 j 07:26	19°♏34'06	4°41'14
morning rise	-1387 Nov 01 j 07:10	12°♐28'22		greatest brilliancy	-1381 Jan 21 j 19:48	19°♏21'52	-1.3m
	-1387 Nov 25 j 05:19	0°♑		min. Earth dist.	-1381 Jan 24 j 01:30	18°♏28'48	0.66358 AU
desc. node	-1387 Dec 08 j 22:42	10°♑13'30		direct	-1381 Mar 03 j 13:01	9°♏33'17	
	-1386 Jan 04 j 02:19	0°♒			-1381 May 10 j 18:22	0°♎	
	-1386 Feb 12 j 04:08	0°♓			-1381 Jul 02 j 09:39	0°♏	
	-1386 Mar 23 j 06:30	0°♑		desc. node	-1381 Jul 31 j 18:28	19°♏17'48	
	-1386 May 02 j 11:23	0°♋			-1381 Aug 16 j 05:03	0°♐	
	-1386 Jun 14 j 10:11	0°♌			-1381 Sep 26 j 06:26	0°♑	
	-1386 Aug 03 j 09:30	0°♍			-1381 Nov 04 j 06:15	0°♒	
retrograde	-1386 Oct 04 j 13:24	19°♍20'53			-1381 Dec 12 j 09:45	0°♓	
asc. node	-1386 Oct 11 j 05:40	19°♍01'56		evening set	-1380 Jan 07 j 19:58	20°♓43'58	
min. Earth dist.	-1386 Nov 08 j 09:33	11°♍21'16	0.61032 AU		-1380 Jan 19 j 18:09	0°♏	
opposition	-1386 Nov 13 j 05:58	9°♍25'09	1°21'30		-1380 Feb 28 j 04:57	0°♋	
greatest brilliancy	-1386 Nov 12 j 20:48	9°♍34'17	-1.6m				
direct	-1386 Dec 20 j 23:17	0°♍36'25		conjunction	-1380 Mar 12 j 13:08	9°♍52'17	0°-46'-1
	-1385 Mar 18 j 13:26	0°♎		minimum elong	-1380 Mar 12 j 15:42	9°♍57'00	0°46'01
	-1385 May 11 j 11:36	0°♏			-1380 Apr 09 j 10:04	0°♌	
	-1385 Jun 29 j 09:59	0°♎		max. Earth dist.	-1380 Apr 24 j 13:59	10°♌40'06	2.49772 AU
	-1385 Aug 14 j 02:12	0°♏		morning rise	-1380 May 11 j 09:16	22°♌15'59	
evening set	-1385 Sep 08 j 05:30	17°♏20'41			-1380 May 22 j 18:43	0°♍	
max. Earth dist.	-1385 Sep 23 j 06:42	28°♏00'49	2.47095 AU	asc. node	-1380 Jun 02 j 03:06	6°♍56'16	
	-1385 Sep 26 j 01:10	0°♐			-1380 Jul 07 j 09:54	0°♎	
desc. node	-1385 Oct 26 j 21:52	22°♐36'00			-1380 Aug 24 j 12:31	0°♏	
					-1380 Oct 15 j 12:01	0°♎	
conjunction	-1385 Oct 31 j 01:02	25°♐41'16	0°-2'-47		-1380 Dec 22 j 05:06	0°♏	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 3

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

retrograde	-1379 Jan 20 j 11:42	4°♄32'57			-1374 Feb 06 j 16:52	0°♄	
	-1379 Feb 16 j 09:36	30°♄			-1374 Mar 25 j 04:49	0°♄	
opposition	-1379 Feb 26 j 20:28	26°♄16'42	4°14'22		-1374 May 11 j 08:59	0°♄	
greatest brilliancy	-1379 Feb 28 j 03:59	25°♄46'49	-1.6m	evening set	-1374 Jun 06 j 04:11	16°♄19'58	
min. Earth dist.	-1379 Mar 05 j 07:46	23°♄49'48	0.59326 AU		-1374 Jun 27 j 17:20	0°♄	
direct	-1379 Apr 08 j 12:32	16°♄31'01		max. Earth dist.	-1374 Jul 14 j 09:54	10°♄38'05	2.66825 AU
	-1379 May 29 j 15:54	0°♄					
desc. node	-1379 Jun 17 j 18:31	9°♄38'51		conjunction	-1374 Jul 22 j 12:57	15°♄50'00	1°09'39
	-1379 Jul 21 j 13:59	0°♄		minimum elong	-1374 Jul 22 j 12:38	15°♄49'28	1°09'41
	-1379 Sep 02 j 20:07	0°♄			-1374 Aug 13 j 13:02	0°♄	
	-1379 Oct 12 j 18:11	0°♄		morning rise	-1374 Sep 05 j 07:37	14°♄49'49	
	-1379 Nov 20 j 11:37	0°♄			-1374 Sep 28 j 07:17	0°♄	
	-1379 Dec 29 j 08:38	0°♄			-1374 Nov 11 j 18:58	0°♄	
	-1378 Feb 07 j 08:40	0°♄			-1374 Dec 25 j 01:48	0°♄	
evening set	-1378 Mar 10 j 20:48	22°♄45'56			-1373 Feb 05 j 10:52	0°♄	
	-1378 Mar 21 j 02:46	0°♄		desc. node	-1373 Feb 07 j 16:25	1°♄35'26	
asc. node	-1378 Apr 20 j 01:02	20°♄40'01			-1373 Mar 19 j 13:13	0°♄	
	-1378 May 03 j 20:46	0°♄			-1373 May 02 j 00:03	0°♄	
					-1373 Jun 22 j 08:24	0°♄	
conjunction	-1378 May 05 j 03:04	0°♄50'44	0°08'55	retrograde	-1373 Aug 04 j 19:14	11°♄29'28	
minimum elong	-1378 May 05 j 02:37	0°♄50'00	0°08'56	min. Earth dist.	-1373 Sep 01 j 08:17	6°♄19'41	0.44662 AU
behind sun begin	-1378 May 04 j 08:17	0°♄19'18		greatest brilliancy	-1373 Sep 07 j 17:52	4°♄10'07	-2.4m
behind sun end	-1378 May 05 j 20:57	1°♄20'41		opposition	-1373 Sep 09 j 09:36	3°♄36'16	-4°-36'-30
max. Earth dist.	-1378 May 27 j 12:38	15°♄42'20	2.60679 AU		-1373 Sep 21 j 00:14	30°♄	
	-1378 Jun 18 j 11:02	0°♄		direct	-1373 Oct 11 j 14:26	27°♄11'21	
morning rise	-1378 Jun 24 j 16:36	4°♄01'18			-1373 Nov 02 j 02:39	0°♄	
	-1378 Aug 04 j 12:34	0°♄		asc. node	-1373 Dec 10 j 22:16	14°♄39'56	
	-1378 Sep 21 j 20:15	0°♄			-1372 Jan 09 j 17:52	0°♄	
	-1378 Nov 11 j 02:00	0°♄			-1372 Mar 01 j 23:06	0°♄	
	-1377 Jan 06 j 02:33	0°♄			-1372 Apr 20 j 16:58	0°♄	
retrograde	-1377 Mar 13 j 09:25	19°♄15'08			-1372 Jun 08 j 05:11	0°♄	
opposition	-1377 Apr 16 j 06:50	12°♄38'22	1°06'09	evening set	-1372 Jul 12 j 22:37	22°♄01'04	
greatest brilliancy	-1377 Apr 16 j 21:18	12°♄26'17	-2.3m		-1372 Jul 25 j 07:35	0°♄	
min. Earth dist.	-1377 Apr 24 j 18:58	9°♄49'00	0.47025 AU	max. Earth dist.	-1372 Aug 07 j 05:50	8°♄25'43	2.61847 AU
desc. node	-1377 May 05 j 17:47	6°♄41'55					
direct	-1377 May 23 j 10:20	4°♄33'20		conjunction	-1372 Aug 28 j 09:33	22°♄25'57	1°01'01
	-1377 Aug 01 j 20:39	0°♄		minimum elong	-1372 Aug 28 j 10:40	22°♄27'49	1°01'02
	-1377 Sep 16 j 05:38	0°♄			-1372 Sep 08 j 15:42	0°♄	
	-1377 Oct 27 j 11:15	0°♄		morning rise	-1372 Oct 14 j 07:16	24°♄31'29	
	-1377 Dec 07 j 01:07	0°♄			-1372 Oct 22 j 02:15	0°♄	
	-1376 Jan 17 j 10:12	0°♄			-1372 Dec 02 j 18:46	0°♄	
	-1376 Feb 29 j 07:43	0°♄		desc. node	-1372 Dec 25 j 15:39	16°♄54'51	
asc. node	-1376 Mar 06 j 23:33	4°♄33'08			-1371 Jan 12 j 02:27	0°♄	
	-1376 Apr 13 j 22:33	0°♄			-1371 Feb 20 j 15:17	0°♄	
evening set	-1376 Apr 27 j 00:02	8°♄35'17			-1371 Apr 01 j 05:15	0°♄	
	-1376 May 30 j 00:10	0°♄			-1371 May 12 j 03:23	0°♄	
					-1371 Jun 25 j 21:48	0°♄	
conjunction	-1376 Jun 15 j 01:54	10°♄18'52	0°51'03		-1371 Aug 26 j 19:19	0°♄	
minimum elong	-1376 Jun 15 j 00:36	10°♄16'46	0°51'03	retrograde	-1371 Sep 19 j 11:40	3°♄34'18	
max. Earth dist.	-1376 Jun 21 j 00:36	14°♄07'06	2.66472 AU		-1371 Oct 11 j 20:06	30°♄	
	-1376 Jul 15 j 22:16	0°♄		min. Earth dist.	-1371 Oct 22 j 09:53	26°♄15'48	0.57138 AU
morning rise	-1376 Jul 31 j 02:01	9°♄38'52		asc. node	-1371 Oct 27 j 20:43	24°♄07'30	
	-1376 Sep 01 j 01:16	0°♄		opposition	-1371 Oct 28 j 14:56	23°♄49'38	0°02'01
	-1376 Oct 18 j 00:45	0°♄		greatest brilliancy	-1372 Feb 09 j 09:14	17°♄19'12	5.7m
	-1376 Dec 03 j 23:48	0°♄		direct	-1371 Dec 04 j 00:46	15°♄30'30	
	-1375 Jan 20 j 16:48	0°♄			-1370 Jan 28 j 21:05	0°♄	
	-1375 Mar 12 j 17:51	0°♄			-1370 Mar 29 j 01:26	0°♄	
desc. node	-1375 Mar 22 j 16:45	5°♄16'08			-1370 May 19 j 12:39	0°♄	
retrograde	-1375 May 27 j 02:00	25°♄51'09			-1370 Jul 06 j 16:23	0°♄	
opposition	-1375 Jun 26 j 08:07	20°♄50'53	-5°-52'-24	evening set	-1370 Aug 21 j 21:45	0°♄30'49	
greatest brilliancy	-1375 Jun 26 j 11:08	20°♄48'53	-2.9m		-1370 Aug 21 j 03:36	0°♄	
min. Earth dist.	-1375 Jun 26 j 23:05	20°♄41'00	0.37616 AU	max. Earth dist.	-1370 Sep 07 j 02:57	11°♄38'43	2.51962 AU
direct	-1375 Jul 26 j 10:46	15°♄47'35			-1370 Oct 03 j 03:53	0°♄	
	-1375 Sep 15 j 03:14	0°♄					
	-1375 Nov 06 j 09:38	0°♄		conjunction	-1370 Oct 10 j 22:20	5°♄35'25	0°21'00
	-1375 Dec 22 j 19:45	0°♄		minimum elong	-1370 Oct 10 j 23:21	5°♄37'15	0°20'58
asc. node	-1374 Jan 22 j 23:05	20°♄23'20		desc. node	-1370 Nov 12 j 14:06	29°♄37'41	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 4

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1370 Nov 13 j 02:02	0°♌		opposition	-1364 Feb 12 j 12:10	11°♏31'47	4°37'33
morning rise	-1370 Dec 04 j 07:57	16°♌03'47		greatest brilliancy	-1364 Feb 13 j 13:19	11°♏07'27	-1.4m
	-1370 Dec 22 j 11:45	0°♏		min. Earth dist.	-1364 Feb 17 j 13:29	9°♏34'28	0.62839 AU
	-1369 Jan 30 j 02:17	0°♐		direct	-1364 Mar 24 j 15:33	1°♏34'06	
	-1369 Mar 09 j 17:27	0°♑			-1364 Jun 14 j 00:24	0°♑	
	-1369 Apr 18 j 07:51	0°♒		desc. node	-1364 Jul 04 j 10:58	12°♑09'06	
	-1369 May 30 j 00:15	0°♓			-1364 Jul 31 j 19:39	0°♒	
	-1369 Jul 14 j 12:55	0°♈			-1364 Sep 11 j 20:19	0°♌	
	-1369 Sep 08 j 04:01	0°♉			-1364 Oct 21 j 06:08	0°♏	
asc. node	-1369 Sep 14 j 20:35	2°♉46'11			-1364 Nov 28 j 15:55	0°♐	
retrograde	-1369 Oct 26 j 13:50	12°♉05'46			-1363 Jan 06 j 06:03	0°♑	
min. Earth dist.	-1369 Dec 03 j 00:53	3°♉12'56	0.65354 AU		-1363 Feb 14 j 22:57	0°♒	
opposition	-1369 Dec 05 j 15:37	2°♉09'50	2°56'51	evening set	-1363 Feb 16 j 06:05	0°♒57'36	
greatest brilliancy	-1369 Dec 05 j 05:13	2°♉20'17	-1.3m		-1363 Mar 28 j 10:10	0°♓	
	-1369 Dec 11 j 02:46	30°♒♈					
direct	-1368 Jan 14 j 00:14	22°♈46'53		conjunction	-1363 Apr 16 j 03:03	13°♓04'12	0°-12'-20
	-1368 Feb 20 j 20:25	0°♉		minimum elong	-1363 Apr 16 j 03:45	13°♓05'25	0°12'20
	-1368 Apr 25 j 12:17	0°♊		behind sun begin	-1363 Apr 15 j 12:55	12°♓39'47	
	-1368 Jun 15 j 16:40	0°♋		behind sun end	-1363 Apr 16 j 18:35	13°♓31'02	
	-1368 Aug 01 j 01:52	0°♌		asc. node	-1363 May 06 j 17:09	27°♓08'49	
	-1368 Sep 13 j 04:04	0°♍			-1363 May 10 j 22:37	0°♈	
desc. node	-1368 Sep 29 j 13:26	11°♍55'14		max. Earth dist.	-1363 May 16 j 08:44	3°♈38'23	2.56938 AU
evening set	-1368 Oct 08 j 01:30	18°♍12'20		morning rise	-1363 Jun 08 j 16:45	19°♈05'41	
	-1368 Oct 23 j 18:53	0°♌			-1363 Jun 25 j 11:05	0°♉	
max. Earth dist.	-1368 Nov 02 j 01:33	7°♌03'13	2.39527 AU		-1363 Aug 11 j 18:21	0°♊	
	-1368 Dec 01 j 17:54	0°♏			-1363 Sep 30 j 00:09	0°♋	
					-1363 Nov 22 j 02:34	0°♌	
conjunction	-1368 Dec 06 j 03:36	3°♏26'33	0°-42'-40		-1362 Feb 11 j 17:21	0°♍	
minimum elong	-1368 Dec 06 j 00:52	3°♏21'13	0°42'41	retrograde	-1362 Feb 18 j 22:27	0°♍18'49	
	-1367 Jan 08 j 22:02	0°♐			-1362 Feb 25 j 23:38	30°♒♑	
morning rise	-1367 Feb 11 j 17:53	26°♐32'08		opposition	-1362 Mar 26 j 09:51	22°♑56'48	2°47'36
	-1367 Feb 16 j 04:46	0°♑		greatest brilliancy	-1362 Mar 27 j 16:14	22°♑29'38	-1.9m
	-1367 Mar 27 j 11:14	0°♒		min. Earth dist.	-1362 Apr 03 j 14:34	20°♑02'01	0.52223 AU
	-1367 May 07 j 12:55	0°♓		direct	-1362 May 04 j 10:29	13°♑57'10	
	-1367 Jun 20 j 04:34	0°♈		desc. node	-1362 May 22 j 09:48	16°♑00'48	
asc. node	-1367 Aug 01 j 19:49	27°♈06'19			-1362 Jun 28 j 02:55	0°♍	
	-1367 Aug 06 j 15:11	0°♉			-1362 Aug 16 j 14:45	0°♌	
	-1367 Oct 01 j 10:36	0°♊			-1362 Sep 27 j 11:55	0°♏	
retrograde	-1367 Nov 29 j 04:32	15°♊57'57			-1362 Nov 06 j 06:42	0°♐	
opposition	-1366 Jan 07 j 21:50	6°♊27'14	4°26'37		-1362 Dec 15 j 22:26	0°♑	
greatest brilliancy	-1366 Jan 08 j 01:54	6°♊23'10	-1.2m		-1361 Jan 25 j 14:20	0°♒	
min. Earth dist.	-1366 Jan 09 j 03:09	5°♊58'00	0.67372 AU		-1361 Mar 08 j 22:09	0°♓	
	-1366 Jan 25 j 16:46	30°♒♉		asc. node	-1361 Mar 24 j 16:33	10°♓50'59	
direct	-1366 Feb 17 j 21:22	26°♉31'41		evening set	-1361 Apr 10 j 13:23	22°♓16'30	
	-1366 Mar 15 j 02:58	0°♊			-1361 Apr 22 j 02:31	0°♈	
	-1366 May 22 j 18:58	0°♋					
	-1366 Jul 11 j 06:50	0°♌		conjunction	-1361 May 31 j 14:11	25°♈54'38	0°37'14
desc. node	-1366 Aug 17 j 12:30	25°♌12'57		minimum elong	-1361 May 31 j 12:54	25°♈52'34	0°37'14
	-1366 Aug 24 j 06:52	0°♍			-1361 Jun 06 j 21:52	0°♉	
	-1366 Oct 04 j 02:05	0°♌		max. Earth dist.	-1361 Jun 12 j 11:42	3°♉35'51	2.64828 AU
	-1366 Nov 11 j 23:34	0°♏		morning rise	-1361 Jul 17 j 22:43	26°♉16'49	
evening set	-1366 Dec 10 j 22:45	22°♏48'24			-1361 Jul 23 j 19:11	0°♊	
	-1366 Dec 20 j 01:26	0°♐			-1361 Sep 09 j 05:47	0°♋	
	-1365 Jan 27 j 07:32	0°♑			-1361 Oct 27 j 02:25	0°♌	
					-1361 Dec 15 j 00:27	0°♍	
conjunction	-1365 Feb 15 j 17:33	14°♑57'08	-1°-1'-37		-1360 Feb 05 j 14:46	0°♌	
minimum elong	-1365 Feb 15 j 19:37	15°♑01'06	1°01'38	desc. node	-1360 Apr 08 j 09:29	25°♌00'33	
	-1365 Mar 07 j 15:12	0°♒		retrograde	-1360 Apr 24 j 22:22	26°♌38'19	
max. Earth dist.	-1365 Apr 06 j 10:06	21°♒54'04	2.44497 AU	opposition	-1360 May 25 j 23:49	21°♌18'30	-3°-6'-37
	-1365 Apr 17 j 17:13	0°♓		greatest brilliancy	-1360 May 26 j 19:29	21°♌04'26	-2.7m
morning rise	-1365 Apr 21 j 09:18	2°♓36'28		min. Earth dist.	-1360 May 31 j 11:18	19°♌44'46	0.39792 AU
	-1365 May 31 j 00:27	0°♈		direct	-1360 Jun 27 j 17:47	15°♌15'47	
asc. node	-1365 Jun 19 j 17:47	13°♈07'35			-1360 Aug 17 j 09:13	0°♏	
	-1365 Jul 15 j 20:18	0°♉			-1360 Oct 06 j 10:06	0°♐	
	-1365 Sep 02 j 19:56	0°♊			-1360 Nov 19 j 11:39	0°♑	
	-1365 Oct 28 j 07:44	0°♋			-1359 Jan 01 j 22:22	0°♒	
retrograde	-1364 Jan 05 j 05:24	20°♋14'31		asc. node	-1359 Feb 08 j 14:39	25°♒34'21	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 5

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1359 Feb 15 j 05:24	0°♄					-1355 Dec 30 j 03:32	0°♄			
	-1359 Apr 01 j 18:45	0°♂					-1354 Feb 07 j 00:41	0°♂			
	-1359 May 18 j 10:00	0°♂					-1354 Mar 17 j 21:50	0°♂			
evening set	-1359 May 22 j 01:47	2°♂20'05					-1354 Apr 26 j 19:13	0°♂			
	-1359 Jul 04 j 12:37	0°♂					-1354 Jun 08 j 02:19	0°♄			
max. Earth dist.	-1359 Jul 05 j 11:02	0°♂35'43	2.67330 AU				-1354 Jul 25 j 15:41	0°♂			
						asc. node	-1354 Oct 01 j 11:08	27°♂23'44			
conjunction	-1359 Jul 08 j 03:57	2°♂19'05	1°05'28			retrograde	-1354 Oct 12 j 18:20	28°♂13'36			
minimum elong	-1359 Jul 08 j 03:07	2°♂17'45	1°05'28			min. Earth dist.	-1354 Nov 17 j 14:26	19°♂53'48	0.62845 AU		
	-1359 Aug 20 j 09:27	0°♂				opposition	-1354 Nov 21 j 16:21	18°♂15'40	2°00'43		
morning rise	-1359 Aug 22 j 01:49	1°♂05'03				greatest brilliancy	-1354 Nov 21 j 05:16	18°♂26'47	-1.5m		
	-1359 Oct 05 j 12:18	0°♄				direct	-1354 Dec 30 j 01:21	9°♂13'12			
	-1359 Nov 19 j 17:06	0°♂					-1353 Mar 10 j 11:01	0°♂			
	-1358 Jan 03 j 03:25	0°♂					-1353 May 05 j 19:29	0°♂			
	-1358 Feb 16 j 05:29	0°♄					-1353 Jun 24 j 10:26	0°♂			
desc. node	-1358 Feb 24 j 08:34	5°♄30'34					-1353 Aug 09 j 08:43	0°♄			
	-1358 Apr 02 j 03:17	0°♂				evening set	-1353 Sep 18 j 18:40	28°♄07'46			
	-1358 May 22 j 21:47	0°♂					-1353 Sep 21 j 09:17	0°♂			
retrograde	-1358 Jul 12 j 01:59	14°♂34'49				max. Earth dist.	-1353 Oct 04 j 17:17	9°♂39'40	2.44331 AU		
min. Earth dist.	-1358 Aug 07 j 17:05	10°♂03'52	0.40219 AU			desc. node	-1353 Oct 17 j 06:24	18°♂54'05			
greatest brilliancy	-1358 Aug 12 j 13:18	8°♂36'41	-2.7m				-1353 Nov 01 j 02:29	0°♂			
opposition	-1358 Aug 14 j 06:00	8°♂05'59	-6°-20'-3								
direct	-1358 Sep 13 j 14:35	2°♂36'20				conjunction	-1353 Nov 12 j 12:56	8°♂40'21	0°-17'-28		
	-1358 Dec 01 j 03:06	0°♂				minimum elong	-1353 Nov 12 j 11:48	8°♂38'11	0°17'29		
asc. node	-1358 Dec 27 j 13:41	14°♂58'11					-1353 Dec 10 j 05:03	0°♄			
	-1357 Jan 21 j 19:25	0°♄				morning rise	-1352 Jan 14 j 02:48	27°♄19'47			
	-1357 Mar 11 j 19:50	0°♂					-1352 Jan 17 j 12:24	0°♂			
	-1357 Apr 29 j 06:41	0°♂					-1352 Feb 24 j 21:16	0°♂			
	-1357 Jun 16 j 05:16	0°♂					-1352 Apr 04 j 04:55	0°♂			
evening set	-1357 Jun 29 j 06:05	8°♂15'12					-1352 May 15 j 08:57	0°♄			
max. Earth dist.	-1357 Jul 29 j 03:20	27°♂24'06	2.64413 AU				-1352 Jun 28 j 09:51	0°♂			
	-1357 Aug 02 j 03:36	0°♂					-1352 Aug 16 j 08:39	0°♂			
						asc. node	-1352 Aug 18 j 10:38	1°♂10'23			
conjunction	-1357 Aug 14 j 07:48	7°♂55'51	1°07'52				-1352 Oct 23 j 00:55	0°♂			
minimum elong	-1357 Aug 14 j 08:23	7°♂56'49	1°07'53			retrograde	-1352 Nov 15 j 17:44	3°♂12'41			
	-1357 Sep 16 j 14:22	0°♄					-1352 Dec 07 j 16:57	30°♂			
morning rise	-1357 Sep 28 j 22:11	8°♄20'03				opposition	-1352 Dec 25 j 17:32	23°♂29'09	4°00'53		
	-1357 Oct 30 j 08:39	0°♂				min. Earth dist.	-1352 Dec 25 j 10:28	23°♂36'14	0.67355 AU		
	-1357 Dec 11 j 12:56	0°♂				greatest brilliancy	-1352 Dec 25 j 14:25	23°♂32'17	-1.2m		
desc. node	-1356 Jan 12 j 08:02	23°♂15'05				direct	-1351 Feb 04 j 05:44	13°♂43'10			
	-1356 Jan 21 j 10:49	0°♄					-1351 Apr 05 j 19:06	0°♂			
	-1356 Mar 01 j 15:29	0°♂					-1351 Jun 01 j 14:09	0°♂			
	-1356 Apr 11 j 00:50	0°♂					-1351 Jul 19 j 10:20	0°♄			
	-1356 May 23 j 09:07	0°♂					-1351 Aug 31 j 22:57	0°♂			
	-1356 Jul 11 j 21:40	0°♄				desc. node	-1351 Sep 03 j 04:29	1°♂35'55			
retrograde	-1356 Sep 03 j 00:36	15°♄48'43					-1351 Oct 11 j 15:22	0°♂			
min. Earth dist.	-1356 Oct 03 j 20:49	9°♄17'21	0.52515 AU			evening set	-1351 Nov 14 j 01:24	25°♂43'28			
opposition	-1356 Oct 11 j 05:20	6°♄29'59	-1°-34'-56				-1351 Nov 19 j 12:40	0°♄			
greatest brilliancy	-1356 Oct 10 j 14:38	6°♄43'58	-2.0m				-1351 Dec 27 j 14:42	0°♂			
	-1356 Nov 01 j 21:01	30°♂									
asc. node	-1356 Nov 13 j 12:51	28°♂49'24				conjunction	-1350 Jan 18 j 13:08	17°♂16'24	-1°-5'-32		
direct	-1356 Nov 15 j 02:33	28°♂48'26				minimum elong	-1350 Jan 18 j 12:25	17°♂15'00	1°05'34		
	-1356 Nov 29 j 02:14	0°♄					-1350 Feb 03 j 20:16	0°♂			
	-1355 Feb 12 j 13:39	0°♂				max. Earth dist.	-1350 Mar 05 j 08:17	22°♂39'02	2.39392 AU		
	-1355 Apr 07 j 03:45	0°♂					-1350 Mar 15 j 02:20	0°♂			
	-1355 May 27 j 02:52	0°♂				morning rise	-1350 Mar 28 j 01:05	9°♂37'57			
	-1355 Jul 13 j 18:12	0°♂					-1350 Apr 25 j 02:36	0°♄			
evening set	-1355 Aug 05 j 18:00	15°♂00'44					-1350 Jun 07 j 10:21	0°♂			
max. Earth dist.	-1355 Aug 24 j 20:26	27°♂46'37	2.56373 AU			asc. node	-1350 Jul 06 j 10:36	19°♂05'34			
	-1355 Aug 28 j 03:14	0°♄					-1350 Jul 23 j 14:42	0°♂			
							-1350 Sep 12 j 00:47	0°♂			
conjunction	-1355 Sep 22 j 20:07	17°♄41'35	0°40'27				-1350 Nov 14 j 23:55	0°♂			
minimum elong	-1355 Sep 22 j 21:33	17°♄44'05	0°40'27			retrograde	-1350 Dec 21 j 05:13	6°♂45'42			
	-1355 Oct 10 j 06:39	0°♂					-1349 Jan 23 j 04:45	30°♂			
morning rise	-1355 Nov 12 j 10:15	24°♂03'13				opposition	-1349 Jan 29 j 04:53	27°♂41'12	4°43'49		
	-1355 Nov 20 j 10:52	0°♂				greatest brilliancy	-1349 Jan 29 j 21:52	27°♂24'30	-1.3m		
desc. node	-1355 Nov 29 j 07:58	6°♂37'52				min. Earth dist.	-1349 Feb 01 j 18:32	26°♂17'05	0.65386 AU		

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 6

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

direct	-1349 Mar 11 j 11:45	17° \mathfrak{G} 39'44		evening set	-1344 May 06 j 08:46	17° \mathfrak{G} 44'35	
	-1349 Apr 30 j 18:07	0° \mathcal{Q}			-1344 May 25 j 09:07	0° \mathbb{I}	
	-1349 Jun 26 j 04:53	0° \mathfrak{M}					
desc. node	-1349 Jul 22 j 03:33	16° \mathfrak{M} 35'15		conjunction	-1344 Jun 23 j 14:14	18° \mathbb{I} 41'25	0°57'24
	-1349 Aug 10 j 20:08	0° $\underline{\mathcal{A}}$		minimum elong	-1344 Jun 23 j 13:02	18° \mathbb{I} 39'31	0°57'25
	-1349 Sep 21 j 04:45	0° \mathfrak{M}		max. Earth dist.	-1344 Jun 26 j 09:53	20° \mathbb{I} 29'18	2.67012 AU
	-1349 Oct 30 j 07:29	0° \mathfrak{A}			-1344 Jul 11 j 08:01	0° \mathfrak{G}	
	-1349 Dec 07 j 12:34	0° \mathfrak{Z}		morning rise	-1344 Aug 08 j 01:44	17° \mathfrak{G} 40'54	
	-1348 Jan 14 j 22:13	0° \approx			-1344 Aug 27 j 08:17	0° \mathcal{Q}	
evening set	-1348 Jan 23 j 01:22	6° \approx 15'59			-1344 Oct 12 j 23:23	0° \mathfrak{M}	
	-1348 Feb 23 j 10:08	0° \mathfrak{K}			-1344 Nov 28 j 04:26	0° $\underline{\mathcal{A}}$	
					-1343 Jan 13 j 09:19	0° \mathfrak{M}	
conjunction	-1348 Mar 25 j 19:57	22° \mathfrak{K} 58'13	0°-34'-17		-1343 Mar 01 j 17:12	0° \mathfrak{A}	
minimum elong	-1348 Mar 25 j 22:00	23° \mathfrak{K} 01'53	0°34'17	desc. node	-1343 Mar 13 j 01:57	6° \mathfrak{A} 54'26	
	-1348 Apr 04 j 16:24	0° \mathcal{Y}			-1343 Apr 24 j 04:43	0° \mathfrak{Z}	
max. Earth dist.	-1348 May 03 j 09:03	20° \mathcal{Y} 00'58	2.52508 AU	retrograde	-1343 Jun 13 j 21:20	13° \mathfrak{Z} 59'17	
	-1348 May 18 j 01:13	0° \mathfrak{B}		min. Earth dist.	-1343 Jul 12 j 06:59	9° \mathfrak{Z} 21'53	0.37699 AU
morning rise	-1348 May 22 j 05:07	2° \mathfrak{B} 48'08		opposition	-1343 Jul 14 j 16:28	8° \mathfrak{Z} 43'07	-6°-41'-51
asc. node	-1348 May 23 j 08:51	3° \mathfrak{B} 34'41		greatest brilliancy	-1343 Jul 14 j 00:42	8° \mathfrak{Z} 53'47	-2.8m
	-1348 Jul 02 j 14:03	0° \mathbb{I}		direct	-1343 Aug 13 j 09:33	3° \mathfrak{Z} 46'11	
	-1348 Aug 19 j 07:07	0° \mathfrak{G}			-1343 Oct 26 j 17:02	0° \approx	
	-1348 Oct 08 j 23:22	0° \mathcal{Q}			-1343 Dec 15 j 13:47	0° \mathfrak{K}	
	-1348 Dec 06 j 22:16	0° \mathfrak{M}		asc. node	-1342 Jan 13 j 04:48	18° \mathfrak{K} 07'46	
retrograde	-1347 Jan 30 j 12:56	13° \mathfrak{M} 43'53			-1342 Jan 31 j 19:46	0° \mathcal{Y}	
opposition	-1347 Mar 08 j 07:22	5° \mathfrak{M} 44'47	3°50'32		-1342 Mar 20 j 00:30	0° \mathfrak{B}	
greatest brilliancy	-1347 Mar 09 j 16:22	5° \mathfrak{M} 13'59	-1.7m		-1342 May 06 j 13:52	0° \mathbb{I}	
min. Earth dist.	-1347 Mar 15 j 11:30	3° \mathfrak{M} 04'53	0.57010 AU	evening set	-1342 Jun 14 j 15:20	24° \mathbb{I} 38'16	
	-1347 Mar 24 j 14:18	30° \mathfrak{R} \mathcal{Q}			-1342 Jun 23 j 02:30	0° \mathfrak{G}	
direct	-1347 Apr 17 j 13:05	26° \mathcal{Q} 11'10		max. Earth dist.	-1342 Jul 19 j 18:34	16° \mathfrak{G} 59'52	2.66200 AU
	-1347 May 12 j 19:02	0° \mathfrak{M}					
desc. node	-1347 Jun 08 j 02:36	10° \mathfrak{M} 08'19		conjunction	-1342 Jul 30 j 18:26	24° \mathfrak{G} 03'45	1°10'13
	-1347 Jul 14 j 03:07	0° $\underline{\mathcal{A}}$		minimum elong	-1342 Jul 30 j 18:27	24° \mathfrak{G} 03'46	1°10'14
	-1347 Aug 27 j 18:07	0° \mathfrak{M}			-1342 Aug 08 j 22:57	0° \mathcal{Q}	
	-1347 Oct 07 j 04:34	0° \mathfrak{A}		morning rise	-1342 Sep 13 j 16:13	23° \mathcal{Q} 23'51	
	-1347 Nov 15 j 04:53	0° \mathfrak{Z}			-1342 Sep 23 j 14:29	0° \mathfrak{M}	
	-1347 Dec 24 j 06:53	0° \approx			-1342 Nov 06 j 19:36	0° $\underline{\mathcal{A}}$	
	-1346 Feb 02 j 10:49	0° \mathfrak{K}			-1342 Dec 19 j 16:07	0° \mathfrak{M}	
	-1346 Mar 16 j 08:16	0° \mathcal{Y}		desc. node	-1341 Jan 29 j 01:26	29° \mathfrak{M} 00'06	
evening set	-1346 Mar 22 j 13:02	4° \mathcal{Y} 19'24			-1341 Jan 30 j 10:29	0° \mathfrak{A}	
asc. node	-1346 Apr 10 j 07:44	17° \mathcal{Y} 15'04			-1341 Mar 12 j 16:06	0° \mathfrak{Z}	
	-1346 Apr 29 j 04:36	0° \mathfrak{B}			-1341 Apr 23 j 13:17	0° \approx	
					-1341 Jun 08 j 08:14	0° \mathfrak{K}	
conjunction	-1346 May 15 j 02:49	10° \mathfrak{B} 35'25	0°20'07	retrograde	-1341 Aug 16 j 12:57	25° \mathfrak{K} 12'22	
minimum elong	-1346 May 15 j 01:56	10° \mathfrak{B} 33'57	0°20'08	min. Earth dist.	-1341 Sep 14 j 04:34	19° \mathfrak{K} 33'30	0.47424 AU
max. Earth dist.	-1346 Jun 02 j 15:14	22° \mathfrak{B} 44'24	2.62380 AU	greatest brilliancy	-1341 Sep 20 j 21:40	17° \mathfrak{K} 10'09	-2.2m
	-1346 Jun 13 j 19:39	0° \mathbb{I}		opposition	-1341 Sep 22 j 05:42	16° \mathfrak{K} 41'25	-3°-28'-27
morning rise	-1346 Jul 03 j 08:44	12° \mathbb{I} 34'27		direct	-1341 Oct 25 j 10:06	9° \mathfrak{K} 46'52	
	-1346 Jul 30 j 18:32	0° \mathfrak{G}		asc. node	-1341 Dec 01 j 03:37	17° \mathfrak{K} 09'34	
	-1346 Sep 16 j 16:48	0° \mathcal{Q}			-1341 Dec 31 j 01:33	0° \mathcal{Y}	
	-1346 Nov 04 j 20:40	0° \mathfrak{M}			-1340 Feb 24 j 15:18	0° \mathfrak{B}	
	-1346 Dec 27 j 05:15	0° $\underline{\mathcal{A}}$			-1340 Apr 15 j 10:42	0° \mathbb{I}	
	-1345 Mar 09 j 18:49	0° \mathfrak{M}			-1340 Jun 03 j 09:44	0° \mathfrak{G}	
retrograde	-1345 Mar 27 j 23:37	1° \mathfrak{M} 53'50			-1340 Jul 20 j 16:32	0° \mathcal{Q}	
	-1345 Apr 14 j 10:43	30° \mathfrak{R} $\underline{\mathcal{A}}$		evening set	-1340 Jul 21 j 11:31	0° \mathcal{Q} 30'42	
desc. node	-1345 Apr 26 j 01:09	26° $\underline{\mathcal{A}}$ 55'23		max. Earth dist.	-1340 Aug 13 j 08:37	15° \mathcal{Q} 29'14	2.60099 AU
opposition	-1345 Apr 29 j 18:46	25° $\underline{\mathcal{A}}$ 45'40	0°-13'-37		-1340 Sep 04 j 01:12	0° \mathfrak{M}	
greatest brilliancy	-1345 Apr 18 j 12:02	29° $\underline{\mathcal{A}}$ 02'59	-2.5m				
min. Earth dist.	-1345 May 07 j 19:58	23° $\underline{\mathcal{A}}$ 13'03	0.44157 AU	conjunction	-1340 Sep 06 j 08:21	1° \mathfrak{M} 33'24	0°54'53
direct	-1345 Jun 04 j 13:32	18° $\underline{\mathcal{A}}$ 21'06		minimum elong	-1340 Sep 06 j 09:40	1° \mathfrak{M} 35'38	0°54'53
	-1345 Jul 18 j 20:25	0° \mathfrak{M}			-1340 Oct 17 j 09:18	0° $\underline{\mathcal{A}}$	
	-1345 Sep 07 j 21:11	0° \mathfrak{A}		morning rise	-1340 Oct 24 j 07:04	4° $\underline{\mathcal{A}}$ 54'26	
	-1345 Oct 20 j 16:20	0° \mathfrak{Z}			-1340 Nov 27 j 21:29	0° \mathfrak{M}	
	-1345 Dec 01 j 02:06	0° \approx		desc. node	-1340 Dec 16 j 00:01	13° \mathfrak{M} 26'37	
	-1344 Jan 12 j 00:07	0° \mathfrak{K}			-1339 Jan 06 j 23:34	0° \mathfrak{A}	
	-1344 Feb 24 j 06:48	0° \mathcal{Y}			-1339 Feb 15 j 06:09	0° \mathfrak{Z}	
asc. node	-1344 Feb 26 j 06:59	1° \mathcal{Y} 21'55			-1339 Mar 26 j 12:53	0° \approx	
	-1344 Apr 09 j 03:47	0° \mathfrak{B}			-1339 May 05 j 22:57	0° \mathfrak{K}	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 7

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1339 Jun 18 j 10:31	0°Υ				-1334 Aug 19 j 03:24	0°♄		
	-1339 Aug 09 j 23:37	0°♄				-1334 Sep 29 j 03:14	0°♍		
retrograde	-1339 Sep 28 j 05:24	13°♄13'24				-1334 Nov 07 j 02:35	0°♎		
asc. node	-1339 Oct 18 j 03:36	10°♄24'02				-1334 Dec 15 j 05:24	0°♏		
min. Earth dist.	-1339 Nov 01 j 05:38	5°♄31'55	0.59383 AU	greatest brilliancy	-1334 Dec 22 j 10:46	5°♏41'31	1.2m		
opposition	-1339 Nov 06 j 17:33	3°♄21'13	0°50'06	evening set	-1334 Dec 26 j 16:36	9°♏01'53			
greatest brilliancy	-1339 Nov 06 j 10:59	3°♄27'43	-1.6m		-1333 Jan 22 j 12:24	0°♐			
	-1339 Nov 15 j 14:29	30°♄Υ							
direct	-1339 Dec 13 j 21:38	24°♄45'02		conjunction	-1333 Mar 02 j 15:41	29°♐50'23	0°-53'-45		
	-1338 Jan 14 j 05:11	0°♄		minimum elong	-1333 Mar 02 j 18:20	29°♐55'21	0°53'45		
	-1338 Mar 22 j 10:00	0°♄			-1333 Mar 02 j 20:49	0°♑			
	-1338 May 14 j 05:12	0°♄			-1333 Apr 12 j 23:14	0°♒			
	-1338 Jul 01 j 20:20	0°♄		max. Earth dist.	-1333 Apr 18 j 05:44	3°♒44'22	2.47448 AU		
	-1338 Aug 16 j 11:46	0°♄		morning rise	-1333 May 03 j 15:19	14°♒31'47			
evening set	-1338 Aug 31 j 14:08	10°♄20'07			-1333 May 26 j 05:44	0°♒			
max. Earth dist.	-1338 Sep 15 j 18:56	20°♄56'50	2.49327 AU	asc. node	-1333 Jun 10 j 01:10	9°♒54'45			
	-1338 Sep 28 j 12:29	0°♄			-1333 Jul 10 j 21:08	0°♓			
					-1333 Aug 28 j 06:02	0°♓			
conjunction	-1338 Oct 22 j 00:33	17°♄05'12	0°07'53		-1333 Oct 20 j 08:09	0°♓			
minimum elong	-1338 Oct 22 j 00:59	17°♄06'00	0°07'52	retrograde	-1332 Jan 14 j 07:17	28°♓43'51			
behind sun begin	-1338 Oct 21 j 04:46	16°♄28'46		opposition	-1332 Feb 21 j 02:47	20°♓14'55	4°26'10		
behind sun end	-1338 Oct 22 j 21:12	17°♄43'16		greatest brilliancy	-1332 Feb 22 j 07:41	19°♓47'14	-1.5m		
desc. node	-1338 Nov 02 j 22:54	25°♄56'16		min. Earth dist.	-1332 Feb 26 j 23:17	18°♓00'38	0.61013 AU		
	-1338 Nov 08 j 09:08	0°♄		direct	-1332 Apr 02 j 01:12	10°♓22'39			
	-1338 Dec 17 j 16:13	0°♄			-1332 Jun 05 j 07:19	0°♓			
morning rise	-1338 Dec 18 j 01:42	0°♄18'21		desc. node	-1332 Jun 24 j 19:32	10°♓43'59			
	-1337 Jan 25 j 03:46	0°♄			-1332 Jul 25 j 13:57	0°♄			
	-1337 Mar 04 j 16:05	0°♄			-1332 Sep 06 j 06:55	0°♄			
	-1337 Apr 13 j 02:55	0°♄			-1332 Oct 15 j 23:34	0°♄			
	-1337 May 24 j 12:42	0°♄			-1332 Nov 23 j 13:13	0°♄			
	-1337 Jul 08 j 07:09	0°♄			-1331 Jan 01 j 06:30	0°♄			
	-1337 Aug 29 j 05:53	0°♄			-1331 Feb 10 j 02:15	0°♄			
asc. node	-1337 Sep 05 j 03:05	3°♄22'51		evening set	-1331 Mar 01 j 09:53	14°♄06'56			
retrograde	-1337 Nov 03 j 07:55	20°♄12'38			-1331 Mar 23 j 15:59	0°♄			
min. Earth dist.	-1337 Dec 11 j 15:23	11°♄03'25	0.66334 AU	asc. node	-1331 Apr 26 j 23:30	23°♄43'40			
opposition	-1337 Dec 13 j 10:33	10°♄20'01	3°23'51						
greatest brilliancy	-1337 Dec 13 j 02:00	10°♄28'37	-1.3m	conjunction	-1331 Apr 27 j 04:42	23°♄52'27	0°00'08		
direct	-1336 Jan 22 j 06:42	0°♄47'51		minimum elong	-1331 Apr 27 j 04:38	23°♄52'21	0°00'08		
	-1336 Apr 18 j 14:35	0°♄		behind sun begin	-1331 Apr 26 j 06:33	23°♄14'52			
	-1336 Jun 10 j 06:56	0°♄		behind sun end	-1331 Apr 28 j 02:44	24°♄29'48			
	-1336 Jul 27 j 03:36	0°♄			-1331 May 06 j 06:16	0°♄			
	-1336 Sep 08 j 09:45	0°♄		max. Earth dist.	-1331 May 23 j 01:23	11°♄12'36	2.59110 AU		
desc. node	-1336 Sep 19 j 21:39	8°♄18'57		morning rise	-1331 Jun 17 j 23:37	28°♄11'44			
	-1336 Oct 19 j 01:39	0°♄			-1331 Jun 20 j 18:30	0°♄			
evening set	-1336 Oct 20 j 15:00	1°♄10'42			-1331 Aug 06 j 21:19	0°♄			
	-1336 Nov 27 j 00:15	0°♄			-1331 Sep 24 j 12:55	0°♄			
max. Earth dist.	-1336 Dec 02 j 20:47	4°♄35'04	2.37667 AU		-1331 Nov 14 j 18:24	0°♄			
					-1330 Jan 14 j 05:03	0°♄			
conjunction	-1336 Dec 21 j 05:40	19°♄01'51	0°-54'-22	retrograde	-1330 Mar 03 j 03:38	11°♄07'01			
minimum elong	-1336 Dec 21 j 02:51	18°♄56'18	0°54'23	opposition	-1330 Apr 06 j 19:29	4°♄08'56	1°54'52		
	-1335 Jan 04 j 03:24	0°♄		greatest brilliancy	-1330 Apr 07 j 18:54	3°♄48'45	-2.1m		
	-1335 Feb 11 j 09:10	0°♄		min. Earth dist.	-1330 Apr 15 j 07:59	1°♄13'28	0.49379 AU		
morning rise	-1335 Feb 28 j 07:55	13°♄05'38			-1330 Apr 19 j 02:48	30°♄♄			
	-1335 Mar 22 j 14:30	0°♄		desc. node	-1330 May 12 j 19:04	25°♄38'18			
	-1335 May 02 j 14:14	0°♄		direct	-1330 May 14 j 22:10	25°♄36'26			
	-1335 Jun 15 j 01:02	0°♄			-1330 Jun 10 j 08:18	0°♄			
asc. node	-1335 Jul 23 j 01:44	24°♄34'50			-1330 Aug 08 j 09:19	0°♄			
	-1335 Jul 31 j 20:21	0°♄			-1330 Sep 20 j 21:02	0°♄			
	-1335 Sep 22 j 20:14	0°♄			-1330 Oct 31 j 08:21	0°♄			
retrograde	-1335 Dec 07 j 01:34	23°♄46'27			-1330 Dec 10 j 10:31	0°♄			
opposition	-1334 Jan 15 j 13:51	14°♄24'02	4°36'25		-1329 Jan 20 j 10:10	0°♄			
greatest brilliancy	-1334 Jan 15 j 22:24	14°♄15'34	-1.2m		-1329 Mar 03 j 23:55	0°♄			
min. Earth dist.	-1334 Jan 17 j 15:15	13°♄35'02	0.66936 AU	asc. node	-1329 Mar 14 j 21:52	7°♄29'26			
direct	-1334 Feb 25 j 17:39	4°♄25'05			-1329 Apr 17 j 08:48	0°♄			
	-1334 May 15 j 10:51	0°♄		evening set	-1329 Apr 20 j 16:46	2°♄12'31			
	-1334 Jul 05 j 15:28	0°♄			-1329 Jun 02 j 06:42	0°♄			
desc. node	-1334 Aug 07 j 19:47	22°♄05'13							

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 8

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

conjunction	-1329 Jun 09 j 13:41	4°II41'43	0°45'41	retrograde	-1324 Sep 12 j 14:46	26°Y39'29	
minimum elong	-1329 Jun 09 j 12:21	4°II39'34	0°45'42	min. Earth dist.	-1324 Oct 14 j 15:09	19°Y41'44	0.55141 AU
max. Earth dist.	-1329 Jun 18 j 01:22	10°II08'42	2.65849 AU	opposition	-1324 Oct 21 j 09:53	17°Y04'12	0°-36'-50
	-1329 Jul 19 j 03:50	0°S		greatest brilliancy	-1324 Oct 21 j 04:23	17°Y09'31	-1.9m
morning rise	-1329 Jul 26 j 02:25	4°S24'49		asc. node	-1324 Nov 03 j 18:50	12°Y23'13	
	-1329 Sep 04 j 09:52	0°Q		direct	-1324 Nov 26 j 04:04	9°Y00'58	
	-1329 Oct 21 j 17:48	0°P			-1323 Feb 03 j 22:26	0°8	
	-1329 Dec 08 j 10:39	0°A			-1323 Apr 01 j 06:29	0°II	
	-1328 Jan 26 j 18:55	0°M			-1323 May 22 j 01:29	0°S	
	-1328 Mar 23 j 08:16	0°J			-1323 Jul 09 j 00:36	0°Q	
desc. node	-1328 Mar 29 j 17:46	2°J43'43		evening set	-1323 Aug 14 j 20:44	24°Q10'42	
retrograde	-1328 May 12 j 19:01	12°J59'26			-1323 Aug 23 j 11:59	0°P	
opposition	-1328 Jun 12 j 05:11	7°J56'41	-4°-47'-45	max. Earth dist.	-1323 Sep 01 j 04:55	5°P55'53	2.54010 AU
greatest brilliancy	-1328 Jun 12 j 19:50	7°J46'47	-2.8m				
min. Earth dist.	-1328 Jun 15 j 05:55	7°J07'38	0.38247 AU	conjunction	-1323 Oct 02 j 22:07	28°P04'47	0°29'50
direct	-1328 Jul 13 j 06:47	2°J33'04		minimum elong	-1323 Oct 02 j 23:22	28°P07'02	0°29'49
	-1328 Sep 25 j 16:22	0°Z			-1323 Oct 05 j 14:46	0°A	
	-1328 Nov 11 j 22:25	0°W			-1323 Nov 15 j 16:33	0°M	
	-1328 Dec 26 j 18:05	0°X		desc. node	-1323 Nov 19 j 15:16	2°M56'57	
asc. node	-1327 Jan 29 j 21:00	22°X46'38		morning rise	-1323 Nov 24 j 11:01	6°M34'05	
	-1327 Feb 09 j 19:06	0°Y			-1323 Dec 25 j 05:59	0°J	
	-1327 Mar 27 j 19:20	0°8			-1322 Feb 01 j 23:29	0°Z	
	-1327 May 13 j 16:52	0°II			-1322 Mar 12 j 16:51	0°W	
evening set	-1327 May 30 j 19:09	10°II51'38			-1322 Apr 21 j 09:04	0°X	
	-1327 Jun 29 j 22:21	0°S			-1322 Jun 02 j 05:04	0°Y	
max. Earth dist.	-1327 Jul 10 j 18:39	6°S54'25	2.67161 AU		-1322 Jul 18 j 07:33	0°8	
					-1322 Sep 16 j 05:32	0°II	
conjunction	-1327 Jul 16 j 10:15	10°S30'42	1°08'22	asc. node	-1322 Sep 21 j 18:21	1°II50'18	
minimum elong	-1327 Jul 16 j 09:42	10°S29'50	1°08'23	retrograde	-1322 Oct 20 j 17:43	6°II43'55	
	-1327 Aug 15 j 18:52	0°Q			-1322 Nov 21 j 15:42	30°R8	
morning rise	-1327 Aug 30 j 04:46	9°Q20'19		min. Earth dist.	-1322 Nov 26 j 12:00	28°805'40	0.64348 AU
	-1327 Sep 30 j 17:16	0°P		opposition	-1322 Nov 29 j 19:02	26°846'20	2°35'04
	-1327 Nov 14 j 12:37	0°A		greatest brilliancy	-1322 Nov 29 j 07:41	26°857'43	-1.4m
	-1327 Dec 28 j 07:01	0°M		direct	-1321 Jan 07 j 18:21	17°832'00	
	-1326 Feb 09 j 07:55	0°J			-1321 Feb 28 j 12:01	0°II	
desc. node	-1326 Feb 14 j 17:27	3°J46'42			-1321 Apr 29 j 19:25	0°S	
	-1326 Mar 24 j 09:29	0°Z			-1321 Jun 19 j 08:02	0°Q	
	-1326 May 08 j 18:38	0°W			-1321 Aug 04 j 13:47	0°P	
	-1326 Jul 15 j 19:58	0°X			-1321 Sep 16 j 16:28	0°A	
retrograde	-1326 Jul 26 j 01:21	0°X44'10		evening set	-1321 Sep 30 j 00:02	9°A38'44	
	-1326 Aug 05 j 02:41	30°RW		desc. node	-1321 Oct 07 j 14:12	15°A13'10	
min. Earth dist.	-1326 Aug 21 j 22:30	25°W54'49	0.42526 AU	max. Earth dist.	-1321 Oct 18 j 21:05	23°A36'24	2.41565 AU
greatest brilliancy	-1326 Aug 27 j 19:38	24°W01'36	-2.5m		-1321 Oct 27 j 09:19	0°M	
opposition	-1326 Aug 29 j 14:13	23°W27'05	-5°-26'-12				
direct	-1326 Sep 29 j 23:00	17°W27'25		conjunction	-1321 Nov 26 j 01:53	22°M43'42	0°-32'-13
	-1326 Nov 18 j 01:25	0°X		minimum elong	-1321 Nov 25 j 23:45	22°M39'34	0°32'13
asc. node	-1326 Dec 17 j 20:12	14°X35'37			-1321 Dec 05 j 10:28	0°J	
	-1325 Jan 14 j 12:57	0°Y			-1320 Jan 12 j 16:01	0°Z	
	-1325 Mar 06 j 03:14	0°8		morning rise	-1320 Jan 30 j 16:50	14°Z10'21	
	-1325 Apr 24 j 06:10	0°II			-1320 Feb 19 j 23:19	0°W	
	-1325 Jun 11 j 12:12	0°S			-1320 Mar 30 j 05:26	0°X	
evening set	-1325 Jul 07 j 16:00	16°S33'55			-1320 May 10 j 06:32	0°Y	
	-1325 Jul 28 j 13:24	0°Q			-1320 Jun 22 j 23:52	0°8	
max. Earth dist.	-1325 Aug 03 j 21:40	4°Q07'21	2.63095 AU	asc. node	-1320 Aug 08 j 17:40	29°820'16	
					-1320 Aug 09 j 20:38	0°II	
conjunction	-1325 Aug 22 j 21:08	16°Q34'44	1°04'27		-1320 Oct 07 j 09:48	0°S	
minimum elong	-1325 Aug 22 j 22:03	16°Q36'14	1°04'27	retrograde	-1320 Nov 23 j 10:09	11°S00'08	
	-1325 Sep 11 j 23:32	0°P		opposition	-1319 Jan 02 j 07:20	1°S23'11	4°17'09
morning rise	-1325 Oct 08 j 02:29	17°P49'08		greatest brilliancy	-1319 Jan 02 j 07:59	1°S22'32	-1.2m
	-1325 Oct 25 j 14:22	0°A		min. Earth dist.	-1319 Jan 02 j 20:04	1°S10'27	0.67496 AU
	-1325 Dec 06 j 12:44	0°M			-1319 Jan 05 j 18:53	30°RII	
desc. node	-1324 Jan 02 j 16:57	19°M59'50		direct	-1319 Feb 12 j 03:03	21°II31'30	
	-1324 Jan 16 j 02:56	0°J			-1319 Mar 25 j 10:06	0°S	
	-1324 Feb 24 j 22:12	0°Z			-1319 May 26 j 09:15	0°Q	
	-1324 Apr 04 j 19:13	0°W			-1319 Jul 14 j 04:29	0°P	
	-1324 May 16 j 03:53	0°X		desc. node	-1319 Aug 24 j 13:39	28°P14'46	
	-1324 Jul 01 j 05:15	0°Y			-1319 Aug 27 j 00:50	0°A	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 9

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1319 Oct 06 j 19:53	0°♌				-1314 Jul 26 j 01:28	0°♍		
	-1319 Nov 14 j 17:49	0°♊				-1314 Sep 11 j 16:26	0°♎		
evening set	-1319 Nov 28 j 23:19	11°♊10'41				-1314 Oct 30 j 00:51	0°♏		
	-1319 Dec 22 j 19:35	0°♐				-1314 Dec 19 j 03:50	0°♑		
	-1318 Jan 30 j 00:50	0°♒				-1313 Feb 13 j 21:21	0°♓		
					retrograde	-1313 Apr 12 j 18:08	15°♓42'15		
conjunction	-1318 Feb 03 j 15:27	3°♒34'33	-1°-5'-3		desc. node	-1313 Apr 16 j 10:17	15°♓37'08		
minimum elong	-1318 Feb 03 j 16:30	3°♒36'35	1°05'05		opposition	-1313 May 14 j 12:30	10°♓02'03	-1°-47'-38	
	-1318 Mar 10 j 06:45	0°♈			greatest brilliancy	-1313 May 15 j 04:27	9°♓50'04	-2.6m	
max. Earth dist.	-1318 Mar 26 j 00:25	11°♈41'38	2.42115 AU		min. Earth dist.	-1313 May 21 j 10:39	7°♓57'43	0.41563 AU	
morning rise	-1318 Apr 11 j 06:51	23°♈33'05			direct	-1313 Jun 17 j 16:12	3°♓22'13		
	-1318 Apr 20 j 06:30	0°♍				-1313 Aug 28 j 10:39	0°♈		
	-1318 Jun 02 j 12:22	0°♉				-1313 Oct 13 j 02:27	0°♊		
asc. node	-1318 Jun 26 j 15:40	16°♉00'57				-1313 Nov 24 j 17:08	0°♋		
	-1318 Jul 18 j 09:39	0°♌				-1312 Jan 06 j 08:32	0°♈		
	-1318 Sep 05 j 19:52	0°♍			asc. node	-1312 Feb 16 j 12:49	28°♈15'48		
	-1318 Nov 02 j 14:19	0°♎				-1312 Feb 19 j 02:33	0°♍		
retrograde	-1318 Dec 29 j 16:05	14°♎51'51				-1312 Apr 04 j 07:16	0°♉		
opposition	-1317 Feb 06 j 07:21	5°♎58'44	4°41'42		evening set	-1312 May 15 j 11:05	26°♉38'03		
greatest brilliancy	-1317 Feb 07 j 04:54	5°♎37'43	-1.4m			-1312 May 20 j 17:07	0°♌		
min. Earth dist.	-1317 Feb 10 j 16:47	4°♎16'04	0.64108 AU						
	-1317 Feb 22 j 16:07	30°♏			conjunction	-1312 Jul 01 j 23:56	26°♌58'47	1°02'32	
direct	-1317 Mar 19 j 13:31	25°♏58'37			minimum elong	-1312 Jul 01 j 22:56	26°♌57'11	1°02'33	
	-1317 Apr 15 j 08:32	0°♏			max. Earth dist.	-1312 Jul 01 j 17:17	26°♌48'11	2.67291 AU	
	-1317 Jun 19 j 09:15	0°♐				-1312 Jul 06 j 17:41	0°♍		
desc. node	-1317 Jul 12 j 12:16	14°♐13'58			morning rise	-1312 Aug 16 j 02:28	25°♍47'10		
	-1317 Aug 05 j 05:06	0°♑				-1312 Aug 22 j 16:02	0°♎		
	-1317 Sep 15 j 23:25	0°♒				-1312 Oct 08 j 00:12	0°♏		
	-1317 Oct 25 j 06:35	0°♓				-1312 Nov 22 j 15:17	0°♑		
	-1317 Dec 02 j 14:04	0°♐				-1311 Jan 06 j 18:21	0°♓		
	-1316 Jan 10 j 01:30	0°♒				-1311 Feb 21 j 00:00	0°♈		
evening set	-1316 Feb 06 j 14:26	21°♒00'09			desc. node	-1311 Mar 03 j 09:48	6°♈48'12		
	-1316 Feb 18 j 15:05	0°♉				-1311 Apr 09 j 05:44	0°♊		
	-1316 Mar 30 j 22:34	0°♍				-1311 Jun 13 j 10:53	0°♋		
					retrograde	-1311 Jun 30 j 07:43	1°♋54'34		
conjunction	-1316 Apr 07 j 05:58	5°♍09'27	0°-21'-43			-1311 Jul 17 j 08:42	30°♏		
minimum elong	-1316 Apr 07 j 07:15	5°♍11'42	0°21'43		min. Earth dist.	-1311 Jul 27 j 07:28	27°♐28'43	0.38766 AU	
max. Earth dist.	-1316 May 11 j 05:55	28°♍35'27	2.55035 AU		greatest brilliancy	-1311 Jul 30 j 23:17	26°♐26'20	-2.8m	
asc. node	-1316 May 13 j 14:57	0°♉11'46			opposition	-1311 Aug 01 j 07:53	26°♐03'06	-6°-44'-48	
	-1316 May 13 j 07:58	0°♊			direct	-1311 Aug 31 j 03:42	20°♐53'17		
morning rise	-1316 Jun 01 j 10:05	12°♊45'29				-1311 Oct 10 j 09:49	0°♋		
	-1316 Jun 27 j 19:03	0°♌				-1311 Dec 07 j 07:27	0°♈		
	-1316 Aug 14 j 05:01	0°♍			asc. node	-1310 Jan 03 j 11:25	16°♈20'41		
	-1316 Oct 02 j 22:40	0°♎				-1310 Jan 25 j 14:33	0°♍		
	-1316 Nov 26 j 20:14	0°♏				-1310 Mar 14 j 17:01	0°♉		
retrograde	-1315 Feb 10 j 04:56	23°♏22'36				-1310 May 01 j 17:18	0°♌		
opposition	-1315 Mar 18 j 07:46	15°♏42'55	3°17'55			-1310 Jun 18 j 11:21	0°♍		
greatest brilliancy	-1315 Mar 19 j 16:17	15°♏13'15	-1.8m		evening set	-1310 Jun 23 j 00:35	2°♍52'53		
min. Earth dist.	-1315 Mar 26 j 03:19	12°♏52'40	0.54448 AU		max. Earth dist.	-1310 Jul 25 j 04:43	23°♍25'08	2.65310 AU	
direct	-1315 Apr 26 j 23:37	6°♏25'52				-1310 Aug 04 j 09:19	0°♎		
desc. node	-1315 May 29 j 10:51	12°♏39'02							
	-1315 Jul 05 j 06:30	0°♑			conjunction	-1310 Aug 08 j 01:34	2°♎23'08	1°09'22	
	-1315 Aug 21 j 03:14	0°♒			minimum elong	-1310 Aug 08 j 01:56	2°♎23'43	1°09'23	
	-1315 Oct 01 j 07:33	0°♓				-1310 Sep 18 j 22:43	0°♏		
	-1315 Nov 09 j 17:05	0°♐			morning rise	-1310 Sep 22 j 06:53	2°♏14'26		
	-1315 Dec 19 j 01:33	0°♒				-1310 Nov 01 j 22:23	0°♑		
	-1314 Jan 28 j 10:51	0°♉				-1310 Dec 14 j 09:59	0°♓		
	-1314 Mar 11 j 12:29	0°♍			desc. node	-1309 Jan 19 j 09:07	26°♓05'51		
asc. node	-1314 Mar 31 j 14:37	13°♍51'45				-1309 Jan 24 j 16:44	0°♈		
evening set	-1314 Apr 02 j 14:04	15°♍12'44				-1309 Mar 06 j 07:07	0°♊		
	-1314 Apr 24 j 11:59	0°♉				-1309 Apr 16 j 04:59	0°♋		
						-1309 May 29 j 13:28	0°♌		
conjunction	-1314 May 24 j 16:30	19°♉55'58	0°30'25			-1309 Jul 23 j 05:27	0°♍		
minimum elong	-1314 May 24 j 15:19	19°♉54'03	0°30'26		retrograde	-1309 Aug 27 j 07:53	7°♍43'20		
max. Earth dist.	-1314 Jun 08 j 11:12	29°♉32'28	2.63831 AU		min. Earth dist.	-1309 Sep 26 j 05:03	1°♍34'56	0.50270 AU	
	-1314 Jun 09 j 04:14	0°♌				-1309 Sep 30 j 12:00	30°♏		
morning rise	-1314 Jul 11 j 19:37	20°♌56'47			opposition	-1309 Oct 03 j 22:54	28°♈42'43	-2°-21'-47	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 10

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

greatest brilliancy	-1309 Oct 03 j 00:33	29° K 03'29	-2.1m			-1304 Dec 30 j 08:39	0° Z	
direct	-1309 Nov 07 j 01:54	21° K 21'04						
asc. node	-1309 Nov 21 j 10:56	22° K 37'08		conjunction	-1303 Jan 06 j 00:22	5° Z 15'05	-1°-2'-27	
	-1309 Dec 17 j 15:13	0° Y		minimum elong	-1303 Jan 05 j 22:25	5° Z 11'15	1°02'29	
	-1308 Feb 17 j 19:03	0° X		max. Earth dist.	-1303 Feb 02 j 06:42	26° Z 39'11	2.37712 AU	
	-1308 Apr 10 j 00:44	0° II			-1303 Feb 06 j 13:49	0° \approx		
	-1308 May 29 j 13:09	0° S		morning rise	-1303 Mar 16 j 07:45	28° \approx 54'25		
	-1308 Jul 16 j 01:32	0° Ω			-1303 Mar 17 j 18:40	0° K		
evening set	-1308 Jul 30 j 02:49	9° Ω 08'04			-1303 Apr 27 j 17:13	0° Y		
max. Earth dist.	-1308 Aug 19 j 18:23	22° Ω 47'42	2.58137 AU		-1303 Jun 10 j 00:21	0° X		
	-1308 Aug 30 j 11:22	0° M		asc. node	-1303 Jul 13 j 08:34	21° X 49'27		
					-1303 Jul 26 j 08:09	0° II		
conjunction	-1308 Sep 15 j 13:52	10° M 59'43	0°47'10		-1303 Sep 15 j 12:52	0° S		
minimum elong	-1308 Sep 15 j 15:18	11° M 02'11	0°47'10		-1303 Nov 28 j 04:34	0° Ω		
	-1308 Oct 12 j 17:58	0° $\underline{\text{A}}$		retrograde	-1303 Dec 15 j 01:55	1° Ω 38'41		
morning rise	-1308 Nov 03 j 20:43	15° $\underline{\text{A}}$ 53'16			-1303 Dec 30 j 23:41	30° R S		
	-1308 Nov 23 j 02:23	0° M		opposition	-1302 Jan 23 j 08:12	22° S 25'34	4°42'02	
desc. node	-1308 Dec 06 j 09:01	9° M 53'01		greatest brilliancy	-1302 Jan 23 j 21:20	22° S 12'36	-1.3m	
	-1307 Jan 01 j 23:37	0° X		min. Earth dist.	-1302 Jan 26 j 05:29	21° S 17'14	0.66214 AU	
	-1307 Feb 10 j 00:43	0° Z		direct	-1302 Mar 05 j 15:06	12° S 24'38		
	-1307 Mar 21 j 01:12	0° \approx			-1302 May 06 j 20:30	0° Ω		
	-1307 Apr 30 j 02:24	0° K			-1302 Jun 29 j 17:00	0° M		
	-1307 Jun 11 j 17:26	0° Y		desc. node	-1302 Jul 29 j 04:47	19° M 11'50		
	-1307 Jul 30 j 15:07	0° X			-1302 Aug 13 j 21:16	0° $\underline{\text{A}}$		
retrograde	-1307 Oct 06 j 15:33	22° X 24'44			-1302 Sep 24 j 02:49	0° M		
asc. node	-1307 Oct 08 j 09:28	22° X 23'27			-1302 Nov 02 j 04:35	0° X		
min. Earth dist.	-1307 Nov 10 j 16:51	14° X 21'46	0.61419 AU		-1302 Dec 10 j 08:32	0° Z		
opposition	-1307 Nov 15 j 10:41	12° X 28'15	1°33'01	evening set	-1301 Jan 11 j 06:49	25° Z 02'00		
greatest brilliancy	-1307 Nov 15 j 00:37	12° X 38'17	-1.5m		-1301 Jan 17 j 16:19	0° \approx		
direct	-1307 Dec 23 j 08:03	3° X 36'45			-1301 Feb 26 j 01:44	0° K		
	-1306 Mar 15 j 00:59	0° II						
	-1306 May 08 j 17:20	0° S		conjunction	-1301 Mar 16 j 16:45	13° K 45'56	0°-43'-12	
	-1306 Jun 26 j 22:45	0° Ω		minimum elong	-1301 Mar 16 j 19:16	13° K 50'30	0°43'12	
	-1306 Aug 11 j 19:15	0° M			-1301 Apr 08 j 04:57	0° Y		
evening set	-1306 Sep 10 j 16:49	20° M 37'57		max. Earth dist.	-1301 Apr 28 j 00:31	13° Y 55'52	2.50311 AU	
	-1306 Sep 23 j 21:14	0° $\underline{\text{A}}$		morning rise	-1301 May 15 j 01:44	25° Y 39'36		
max. Earth dist.	-1306 Sep 25 j 17:16	1° $\underline{\text{A}}$ 19'01	2.46597 AU		-1301 May 21 j 11:18	0° X		
desc. node	-1306 Oct 24 j 07:33	22° $\underline{\text{A}}$ 13'44		asc. node	-1301 May 31 j 07:19	6° X 36'37		
					-1301 Jul 05 j 23:32	0° II		
conjunction	-1306 Nov 02 j 19:58	29° $\underline{\text{A}}$ 20'38	0°-6'-21		-1301 Aug 22 j 21:16	0° S		
minimum elong	-1306 Nov 02 j 19:35	29° $\underline{\text{A}}$ 19'56	0°06'22		-1301 Oct 13 j 08:18	0° Ω		
behind sun begin	-1306 Nov 01 j 21:25	28° $\underline{\text{A}}$ 38'19			-1301 Dec 16 j 01:29	0° M		
behind sun end	-1306 Nov 03 j 17:45	0° M 01'34		retrograde	-1300 Jan 23 j 20:57	7° M 35'37		
	-1306 Nov 03 j 16:55	0° M			-1300 Feb 28 j 11:43	30° R Ω		
	-1306 Dec 12 j 22:08	0° X		opposition	-1300 Mar 01 j 03:56	29° Ω 22'15	4°08'01	
morning rise	-1305 Jan 01 j 20:41	15° X 32'43		greatest brilliancy	-1300 Mar 02 j 11:30	28° Ω 52'25	-1.6m	
	-1305 Jan 20 j 07:22	0° Z		min. Earth dist.	-1300 Mar 07 j 18:40	26° Ω 52'50	0.58915 AU	
greatest brilliancy	-1305 Feb 15 j 09:37	20° Z 25'27	1.2m	direct	-1300 Apr 10 j 18:57	19° Ω 38'51		
	-1305 Feb 27 j 17:10	0° \approx			-1300 May 24 j 16:35	0° M		
	-1305 Apr 08 j 01:08	0° K		desc. node	-1300 Jun 15 j 03:54	10° M 14'43		
	-1305 May 19 j 05:40	0° Y			-1300 Jul 18 j 17:46	0° $\underline{\text{A}}$		
	-1305 Jul 02 j 10:49	0° X			-1300 Aug 31 j 10:59	0° M		
	-1305 Aug 21 j 05:57	0° II			-1300 Oct 10 j 13:30	0° X		
asc. node	-1305 Aug 26 j 08:32	2° II 45'22			-1300 Nov 18 j 08:38	0° Z		
retrograde	-1305 Nov 11 j 00:46	28° II 10'45			-1300 Dec 27 j 05:45	0° \approx		
min. Earth dist.	-1305 Dec 20 j 03:24	18° II 46'15	0.67029 AU		-1299 Feb 05 j 04:49	0° K		
opposition	-1305 Dec 21 j 02:57	18° II 22'37	3°46'52	evening set	-1299 Mar 13 j 16:19	26° K 19'39		
greatest brilliancy	-1305 Dec 20 j 21:04	18° II 28'31	-1.3m		-1299 Mar 18 j 21:18	0° Y		
direct	-1304 Jan 30 j 09:16	8° II 42'21		asc. node	-1299 Apr 17 j 05:55	20° Y 18'51		
	-1304 Apr 10 j 19:25	0° S			-1299 May 01 j 13:34	0° X		
	-1304 Jun 04 j 16:07	0° Ω						
	-1304 Jul 22 j 03:07	0° M		conjunction	-1299 May 07 j 14:36	4° X 02'53	0°12'00	
	-1304 Sep 03 j 14:19	0° $\underline{\text{A}}$		minimum elong	-1299 May 07 j 14:01	4° X 01'56	0°11'59	
desc. node	-1304 Sep 10 j 05:52	4° $\underline{\text{A}}$ 46'57		behind sun begin	-1299 May 06 j 23:40	3° X 37'57		
	-1304 Oct 14 j 07:29	0° M		behind sun end	-1299 May 08 j 04:23	4° X 25'54		
evening set	-1304 Nov 03 j 01:07	15° M 04'41		max. Earth dist.	-1299 May 29 j 09:52	18° X 28'46	2.61013 AU	
	-1304 Nov 22 j 06:03	0° X			-1299 Jun 16 j 02:07	0° II		

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 11

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

morning rise	-1299 Jun 26 j 21:43	6°II58'47		direct	-1294 Oct 14 j 20:33	0°K59'44	
	-1299 Aug 02 j 01:46	0°S		asc. node	-1294 Dec 08 j 01:28	15°K35'32	
	-1299 Sep 19 j 06:09	0°Q			-1293 Jan 06 j 03:05	0°Y	
	-1299 Nov 08 j 03:37	0°M			-1293 Feb 28 j 02:25	0°B	
	-1298 Jan 01 j 21:11	0°A			-1293 Apr 19 j 02:31	0°II	
retrograde	-1298 Mar 16 j 16:32	22°A54'23			-1293 Jun 06 j 18:10	0°S	
opposition	-1298 Apr 19 j 08:01	16°A23'19	0°47'27	evening set	-1293 Jul 16 j 02:53	24°S56'32	
greatest brilliancy	-1298 Apr 19 j 18:42	16°A14'30	-2.3m		-1293 Jul 23 j 23:06	0°Q	
min. Earth dist.	-1298 Apr 27 j 18:47	13°A36'24	0.46453 AU	max. Earth dist.	-1293 Aug 09 j 19:43	10°Q59'22	2.61537 AU
desc. node	-1298 May 03 j 02:14	11°A59'10					
direct	-1298 May 26 j 06:51	8°A25'30		conjunction	-1293 Aug 31 j 14:43	25°Q26'42	0°59'29
	-1298 Jul 28 j 21:29	0°M		minimum elong	-1293 Aug 31 j 15:54	25°Q28'41	0°59'29
	-1298 Sep 13 j 09:46	0°J			-1293 Sep 07 j 09:15	0°M	
	-1298 Oct 24 j 23:33	0°Z		morning rise	-1293 Oct 17 j 16:22	27°M44'42	
	-1298 Dec 04 j 16:42	0°≈			-1293 Oct 20 j 21:17	0°A	
	-1297 Jan 15 j 02:53	0°K			-1293 Dec 01 j 14:37	0°M	
	-1297 Feb 27 j 00:16	0°Y		desc. node	-1293 Dec 24 j 01:14	16°M35'25	
asc. node	-1297 Mar 05 j 05:18	4°Y14'49			-1292 Jan 10 j 22:27	0°J	
	-1297 Apr 12 j 14:29	0°B			-1292 Feb 19 j 10:33	0°Z	
evening set	-1297 Apr 30 j 08:19	11°B39'24			-1292 Mar 29 j 22:27	0°≈	
	-1297 May 28 j 15:27	0°II			-1292 May 09 j 15:46	0°K	
					-1292 Jun 22 j 20:59	0°Y	
conjunction	-1297 Jun 18 j 05:43	13°II12'48	0°52'54		-1292 Aug 19 j 05:18	0°B	
minimum elong	-1297 Jun 18 j 04:26	13°II10'44	0°52'55	retrograde	-1292 Sep 21 j 16:31	6°B46'13	
max. Earth dist.	-1297 Jun 23 j 12:02	16°II34'43	2.66596 AU		-1292 Oct 23 j 06:36	30°R Y	
	-1297 Jul 14 j 13:09	0°S		min. Earth dist.	-1292 Oct 24 j 19:51	29°Y24'09	0.57566 AU
morning rise	-1297 Aug 03 j 03:03	12°S27'56		asc. node	-1292 Oct 25 j 01:30	29°Y18'40	
	-1297 Aug 30 j 15:42	0°Q		opposition	-1292 Oct 30 j 22:42	27°Y00'03	0°15'34
	-1297 Oct 16 j 13:47	0°M		greatest brilliancy	-1292 Oct 30 j 20:33	27°Y02'09	-1.7m
	-1297 Dec 02 j 09:04	0°A		direct	-1292 Dec 06 j 12:38	18°Y37'47	
	-1296 Jan 18 j 16:54	0°M			-1291 Jan 23 j 21:51	0°B	
	-1296 Mar 08 j 14:22	0°J			-1291 Mar 25 j 23:46	0°II	
desc. node	-1296 Mar 20 j 02:44	6°J21'51			-1291 May 16 j 21:15	0°S	
	-1296 May 21 j 07:16	0°Z			-1291 Jul 04 j 06:14	0°Q	
retrograde	-1296 May 31 j 03:52	0°Z37'08			-1291 Aug 18 j 21:03	0°M	
	-1296 Jun 09 j 22:07	30°R J		evening set	-1291 Aug 24 j 05:53	3°M38'45	
opposition	-1296 Jun 30 j 10:12	25°J35'40	-6°-7'-54	max. Earth dist.	-1291 Sep 09 j 02:42	14°M34'10	2.51490 AU
greatest brilliancy	-1296 Jun 30 j 10:02	25°J35'46	-2.9m		-1291 Sep 30 j 23:55	0°A	
min. Earth dist.	-1296 Jun 30 j 11:50	25°J34'34	0.37533 AU				
direct	-1296 Jul 30 j 11:06	20°J35'24		conjunction	-1291 Oct 13 j 11:50	9°A00'00	0°17'46
	-1296 Sep 08 j 13:55	0°Z		minimum elong	-1291 Oct 13 j 12:43	9°A01'35	0°17'45
	-1296 Nov 02 j 23:15	0°≈		desc. node	-1291 Nov 09 j 23:49	29°A15'25	
	-1296 Dec 20 j 00:14	0°K			-1291 Nov 10 j 23:40	0°M	
asc. node	-1295 Jan 20 j 03:02	20°K15'31		morning rise	-1291 Dec 07 j 08:38	19°M57'53	
	-1295 Feb 04 j 02:53	0°Y			-1291 Dec 20 j 10:03	0°J	
	-1295 Mar 22 j 17:13	0°B			-1290 Jan 28 j 00:20	0°Z	
	-1295 May 08 j 22:37	0°II			-1290 Mar 07 j 14:19	0°≈	
evening set	-1295 Jun 08 j 08:11	19°II13'45			-1290 Apr 16 j 02:23	0°K	
	-1295 Jun 25 j 07:58	0°S			-1290 May 27 j 14:29	0°Y	
max. Earth dist.	-1295 Jul 16 j 02:24	13°S13'43	2.66741 AU		-1290 Jul 11 j 17:46	0°B	
					-1290 Sep 03 j 16:33	0°II	
conjunction	-1295 Jul 24 j 15:08	18°S41'23	1°09'55	asc. node	-1290 Sep 12 j 01:08	3°II42'11	
minimum elong	-1295 Jul 24 j 14:55	18°S41'02	1°09'56	retrograde	-1290 Oct 28 j 13:50	14°II59'22	
	-1295 Aug 11 j 04:43	0°Q		min. Earth dist.	-1290 Dec 05 j 05:34	6°II03'39	0.65567 AU
morning rise	-1295 Sep 07 j 09:56	17°Q43'50		opposition	-1290 Dec 07 j 16:58	5°II04'00	3°05'02
	-1295 Sep 25 j 23:48	0°M		greatest brilliancy	-1290 Dec 07 j 06:41	5°II14'19	-1.3m
	-1295 Nov 09 j 11:43	0°A			-1290 Dec 21 j 06:09	30°R B	
	-1295 Dec 22 j 17:46	0°M		direct	-1289 Jan 16 j 05:00	25°B39'17	
	-1294 Feb 03 j 00:40	0°J			-1289 Feb 13 j 17:32	0°II	
desc. node	-1294 Feb 05 j 02:43	1°J29'28			-1289 Apr 23 j 08:11	0°S	
	-1294 Mar 16 j 22:18	0°Z			-1289 Jun 14 j 01:53	0°Q	
	-1294 Apr 28 j 21:31	0°≈			-1289 Jul 30 j 17:20	0°M	
	-1294 Jun 17 j 00:58	0°K			-1289 Sep 11 j 23:29	0°A	
retrograde	-1294 Aug 07 j 16:04	15°K31'28		desc. node	-1289 Sep 27 j 22:43	11°A34'35	
min. Earth dist.	-1294 Sep 04 j 10:44	10°K15'40	0.45147 AU	evening set	-1289 Oct 11 j 21:43	21°A53'45	
greatest brilliancy	-1294 Sep 10 j 21:32	8°K03'16	-2.4m		-1289 Oct 22 j 16:49	0°M	
opposition	-1294 Sep 12 j 11:42	7°K30'20	-4°-20'-20	max. Earth dist.	-1289 Nov 08 j 11:32	12°M46'44	2.39124 AU

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 12

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1289 Nov 30 j 17:10	0°♊				-1284 Sep 27 j 06:41	0°♏		
						-1284 Nov 18 j 17:25	0°♍		
conjunction	-1289 Dec 10 j 11:03	7°♊37'19	0°-45'-41			-1283 Jan 27 j 00:55	0°♎		
minimum elong	-1289 Dec 10 j 08:15	7°♊31'51	0°45'41	retrograde		-1283 Feb 21 j 15:45	3°♎35'40		
	-1288 Jan 07 j 21:30	0°♎				-1283 Mar 17 j 17:52	30°♍		
	-1288 Feb 15 j 03:22	0°♎		opposition		-1283 Mar 29 j 00:35	26°♍17'52	2°34'47	
morning rise	-1288 Feb 16 j 10:45	1°♎00'58		greatest brilliancy		-1283 Mar 30 j 05:31	25°♍52'13	-2.0m	
	-1288 Mar 25 j 08:01	0°♎		min. Earth dist.		-1283 Apr 06 j 08:14	23°♍21'42	0.51708 AU	
	-1288 May 05 j 06:50	0°♎		direct		-1283 May 06 j 22:46	17°♍22'34		
	-1288 Jun 17 j 18:09	0°♎		desc. node		-1283 May 19 j 20:00	18°♍27'49		
asc. node	-1288 Jul 29 j 23:25	27°♎02'03				-1283 Jun 23 j 10:49	0°♎		
	-1288 Aug 03 j 20:24	0°♎				-1283 Aug 13 j 18:30	0°♎		
	-1288 Sep 27 j 09:31	0°♎				-1283 Sep 25 j 01:21	0°♎		
retrograde	-1288 Dec 01 j 05:00	18°♎47'17				-1283 Nov 03 j 23:35	0°♎		
opposition	-1287 Jan 09 j 22:10	9°♎17'56	4°29'39			-1283 Dec 13 j 16:15	0°♎		
greatest brilliancy	-1287 Jan 10 j 03:03	9°♎13'05	-1.2m			-1282 Jan 23 j 07:52	0°♎		
min. Earth dist.	-1287 Jan 11 j 07:07	8°♎45'10	0.67313 AU			-1282 Mar 06 j 14:45	0°♎		
	-1287 Feb 09 j 23:16	30°♎		asc. node		-1282 Mar 21 j 19:46	10°♎28'47		
direct	-1287 Feb 19 j 23:35	29°♎21'48		evening set		-1282 Apr 13 j 03:08	25°♎34'33		
	-1287 Mar 02 j 09:09	0°♎				-1282 Apr 19 j 18:04	0°♎		
	-1287 May 19 j 13:52	0°♎							
	-1287 Jul 08 j 17:10	0°♎		conjunction		-1282 Jun 02 j 21:56	28°♎57'35	0°39'42	
desc. node	-1287 Aug 14 j 21:05	24°♎59'53		minimum elong		-1282 Jun 02 j 20:37	28°♎55'27	0°39'42	
	-1287 Aug 21 j 23:41	0°♎				-1282 Jun 04 j 12:32	0°♎		
	-1287 Oct 01 j 22:27	0°♎		max. Earth dist.		-1282 Jun 14 j 03:09	6°♎11'48	2.65061 AU	
	-1287 Nov 09 j 21:50	0°♎		morning rise		-1282 Jul 20 j 01:56	29°♎10'28		
evening set	-1287 Dec 14 j 11:56	27°♎13'28				-1282 Jul 21 j 09:06	0°♎		
	-1287 Dec 18 j 00:20	0°♎				-1282 Sep 06 j 18:28	0°♎		
	-1286 Jan 25 j 06:00	0°♎				-1282 Oct 24 j 12:04	0°♎		
						-1282 Dec 12 j 02:23	0°♎		
conjunction	-1286 Feb 19 j 04:10	19°♎10'14	-1°00'00			-1281 Feb 01 j 16:35	0°♎		
minimum elong	-1286 Feb 19 j 06:27	19°♎14'34	1°00'00	desc. node		-1281 Apr 06 j 18:44	27°♎51'29		
	-1286 Mar 05 j 12:20	0°♎				-1281 Apr 17 j 10:46	0°♎		
max. Earth dist.	-1286 Apr 09 j 13:55	25°♎45'10	2.45056 AU	retrograde		-1281 Apr 29 j 17:16	0°♎55'01		
	-1286 Apr 15 j 12:13	0°♎				-1281 May 11 j 22:22	30°♎		
morning rise	-1286 Apr 24 j 07:45	6°♎15'25		opposition		-1281 May 30 j 16:14	25°♎39'08	-3°-30'-38	
	-1286 May 28 j 16:41	0°♎		greatest brilliancy		-1281 May 31 j 12:05	25°♎25'07	-2.7m	
asc. node	-1286 Jun 16 j 23:01	12°♎51'53		min. Earth dist.		-1281 Jun 04 j 18:14	24°♎13'24	0.39457 AU	
	-1286 Jul 13 j 08:42	0°♎		direct		-1281 Jul 02 j 00:41	19°♎44'34		
	-1286 Aug 31 j 01:16	0°♎				-1281 Aug 12 j 09:28	0°♎		
retrograde	-1286 Oct 24 j 13:18	0°♎				-1281 Oct 04 j 03:35	0°♎		
	-1285 Jan 07 j 10:22	23°♎09'04				-1281 Nov 17 j 18:24	0°♎		
opposition	-1285 Feb 14 j 15:45	14°♎28'38	4°34'29			-1281 Dec 31 j 09:55	0°♎		
greatest brilliancy	-1285 Feb 15 j 17:32	14°♎03'45	-1.4m	asc. node		-1280 Feb 06 j 18:44	25°♎19'10		
min. Earth dist.	-1285 Feb 19 j 21:05	12°♎27'53	0.62513 AU			-1280 Feb 13 j 18:41	0°♎		
direct	-1285 Mar 27 j 19:14	4°♎31'55				-1280 Mar 30 j 08:31	0°♎		
	-1285 Jun 11 j 15:43	0°♎				-1280 May 15 j 23:58	0°♎		
desc. node	-1285 Jul 02 j 20:17	12°♎19'58		evening set		-1280 May 24 j 08:14	5°♎19'19		
	-1285 Jul 30 j 06:09	0°♎				-1280 Jul 02 j 03:01	0°♎		
	-1285 Sep 10 j 13:21	0°♎		max. Earth dist.		-1280 Jul 07 j 01:22	3°♎08'25	2.67331 AU	
	-1285 Oct 20 j 02:01	0°♎							
	-1285 Nov 27 j 12:48	0°♎		conjunction		-1280 Jul 10 j 07:22	5°♎12'41	1°06'24	
	-1284 Jan 05 j 02:46	0°♎		minimum elong		-1280 Jul 10 j 06:37	5°♎11'29	1°06'25	
	-1284 Feb 13 j 18:43	0°♎				-1280 Aug 18 j 00:25	0°♎		
evening set	-1284 Feb 20 j 10:23	4°♎54'52		morning rise		-1280 Aug 24 j 03:52	3°♎57'41		
	-1284 Mar 26 j 04:27	0°♎				-1280 Oct 03 j 03:28	0°♎		
						-1280 Nov 17 j 07:26	0°♎		
conjunction	-1284 Apr 18 j 20:58	16°♎32'01	0°-9'-2			-1280 Dec 31 j 15:12	0°♎		
minimum elong	-1284 Apr 18 j 21:29	16°♎32'54	0°09'02			-1279 Feb 13 j 11:57	0°♎		
behind sun begin	-1284 Apr 18 j 02:10	15°♎59'39		desc. node		-1279 Feb 21 j 18:26	5°♎38'55		
behind sun end	-1284 Apr 19 j 16:47	17°♎06'08				-1279 Mar 29 j 21:41	0°♎		
asc. node	-1284 May 03 j 21:52	26°♎48'33				-1279 May 17 j 17:26	0°♎		
	-1284 May 08 j 15:08	0°♎		retrograde		-1279 Jul 15 j 11:35	19°♎04'30		
max. Earth dist.	-1284 May 18 j 07:25	6°♎29'45	2.57388 AU	min. Earth dist.		-1279 Aug 11 j 00:27	14°♎30'56	0.40616 AU	
morning rise	-1284 Jun 11 j 01:19	22°♎11'14		greatest brilliancy		-1279 Aug 16 j 02:54	12°♎58'10	-2.6m	
	-1284 Jun 23 j 01:35	0°♎		opposition		-1279 Aug 17 j 20:11	12°♎26'35	-6°-9'-36	
	-1284 Aug 09 j 06:09	0°♎		direct		-1279 Sep 17 j 10:07	6°♎51'31		

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 13

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1279 Nov 27 j 01:27	0° H		minimum elong	-1274 Nov 15 j 13:26	12° M 34'05	0°21'10
asc. node	-1279 Dec 24 j 18:09	15° H 15'47			-1274 Dec 08 j 03:34	0° J	
	-1278 Jan 18 j 20:06	0° Y			-1273 Jan 15 j 10:55	0° Z	
	-1278 Mar 09 j 04:02	0° B		morning rise	-1273 Jan 17 j 19:54	1° Z 51'56	
	-1278 Apr 26 j 18:07	0° II			-1273 Feb 22 j 18:59	0° \approx	
	-1278 Jun 13 j 18:48	0° S			-1273 Apr 03 j 00:57	0° H	
evening set	-1278 Jul 01 j 10:05	11° S 09'40			-1273 May 14 j 02:07	0° Y	
	-1278 Jul 30 j 19:02	0° Ω			-1273 Jun 26 j 21:50	0° B	
max. Earth dist.	-1278 Jul 30 j 19:29	0° Ω 00'44	2.64191 AU		-1273 Aug 14 j 08:07	0° II	
				asc. node	-1273 Aug 16 j 15:52	1° II 19'52	
conjunction	-1278 Aug 16 j 11:45	10° Ω 52'40	1°07'02		-1273 Oct 16 j 10:49	0° S	
minimum elong	-1278 Aug 16 j 12:26	10° Ω 53'47	1°07'04	retrograde	-1273 Nov 18 j 16:36	5° S 59'59	
	-1278 Sep 14 j 07:30	0° M			-1273 Dec 19 j 04:32	30° R II	
morning rise	-1278 Oct 01 j 04:18	11° M 24'37		opposition	-1273 Dec 28 j 17:05	26° II 17'38	4°05'47
	-1278 Oct 28 j 03:03	0° A		greatest brilliancy	-1273 Dec 28 j 14:35	26° II 20'07	-1.2m
	-1278 Dec 09 j 07:51	0° M		min. Earth dist.	-1273 Dec 28 j 13:32	26° II 21'11	0.67416 AU
desc. node	-1277 Jan 09 j 18:05	22° M 59'03		direct	-1272 Feb 07 j 08:05	16° II 30'35	
	-1277 Jan 19 j 05:22	0° J			-1272 Apr 01 j 10:00	0° S	
	-1277 Feb 28 j 08:30	0° Z			-1272 May 29 j 18:15	0° Ω	
	-1277 Apr 09 j 14:14	0° \approx			-1272 Jul 17 j 00:22	0° M	
	-1277 May 21 j 13:45	0° H			-1272 Aug 29 j 18:00	0° A	
	-1277 Jul 08 j 16:09	0° Y		desc. node	-1272 Aug 31 j 14:57	1° A 20'13	
retrograde	-1277 Sep 06 j 09:40	19° Y 15'29			-1272 Oct 09 j 13:13	0° M	
min. Earth dist.	-1277 Oct 07 j 11:29	12° Y 39'37	0.53017 AU	evening set	-1272 Nov 17 j 08:15	29° M 53'01	
opposition	-1277 Oct 14 j 18:28	9° Y 53'05	-1°-19'-16		-1272 Nov 17 j 11:49	0° J	
greatest brilliancy	-1277 Oct 14 j 06:08	10° Y 04'50	-2.0m		-1272 Dec 25 j 13:57	0° Z	
asc. node	-1277 Nov 11 j 17:03	2° Y 27'38		conjunction	-1271 Jan 22 j 04:59	21° Z 44'59	-1°-5'-49
direct	-1277 Nov 18 j 19:52	2° Y 07'23		minimum elong	-1271 Jan 22 j 04:42	21° Z 44'27	1°05'52
	-1276 Feb 10 j 00:56	0° B			-1271 Feb 01 j 18:36	0° \approx	
	-1276 Apr 04 j 08:18	0° II			-1271 Mar 10 j 11:21	28° \approx 07'53	2.39865 AU
	-1276 May 24 j 13:41	0° S		max. Earth dist.	-1271 Mar 12 j 22:58	0° H	
	-1276 Jul 11 j 08:44	0° Ω		morning rise	-1271 Mar 31 j 11:01	13° H 45'04	
evening set	-1276 Aug 08 j 00:34	18° Ω 03'28			-1271 Apr 22 j 20:54	0° Y	
	-1276 Aug 25 j 20:33	0° M			-1271 Jun 05 j 01:33	0° B	
max. Earth dist.	-1276 Aug 26 j 16:21	0° M 33'31	2.55942 AU	asc. node	-1271 Jul 03 j 13:59	18° B 50'49	
					-1271 Jul 21 j 01:09	0° II	
conjunction	-1276 Sep 25 j 06:34	20° M 56'59	0°37'47		-1271 Sep 09 j 00:24	0° S	
minimum elong	-1276 Sep 25 j 07:58	20° M 59'26	0°37'45		-1271 Nov 09 j 04:15	0° Ω	
	-1276 Oct 08 j 02:08	0° A		retrograde	-1271 Dec 23 j 07:25	9° Ω 36'07	
morning rise	-1276 Nov 15 j 05:05	27° A 41'21		opposition	-1270 Jan 31 j 06:24	0° Ω 33'30	4°43'11
	-1276 Nov 18 j 07:50	0° M		greatest brilliancy	-1270 Feb 01 j 00:12	0° Ω 16'03	-1.3m
desc. node	-1276 Nov 26 j 16:24	6° M 13'57			-1270 Feb 01 j 16:35	30° R S	
	-1276 Dec 28 j 01:15	0° J		min. Earth dist.	-1270 Feb 03 j 23:54	29° S 05'53	0.65185 AU
	-1275 Feb 04 j 22:18	0° Z		direct	-1270 Mar 13 j 14:19	20° S 32'20	
	-1275 Mar 15 j 18:17	0° \approx			-1270 Apr 25 j 16:49	0° Ω	
	-1275 Apr 24 j 12:56	0° H			-1270 Jun 23 j 08:16	0° M	
	-1275 Jun 05 j 14:13	0° Y		desc. node	-1270 Jul 19 j 13:40	16° M 33'57	
	-1275 Jul 22 j 11:35	0° B			-1270 Aug 08 j 10:49	0° A	
asc. node	-1275 Sep 28 j 16:19	29° B 31'12			-1270 Sep 19 j 00:25	0° M	
	-1275 Oct 01 j 07:42	0° II			-1270 Oct 28 j 05:32	0° J	
retrograde	-1275 Oct 14 j 19:08	1° II 10'09			-1270 Dec 05 j 11:22	0° Z	
	-1275 Oct 27 j 18:31	30° R B			-1269 Jan 12 j 20:31	0° \approx	
min. Earth dist.	-1275 Nov 19 j 19:50	22° B 47'17	0.63149 AU		-1269 Jan 26 j 09:32	10° \approx 25'28	
opposition	-1275 Nov 23 j 18:46	21° B 12'15	2°10'52	evening set	-1269 Feb 21 j 07:01	0° H	
greatest brilliancy	-1275 Nov 23 j 07:14	21° B 23'48	-1.5m				
direct	-1274 Jan 01 j 07:46	12° B 07'25		conjunction	-1269 Mar 29 j 20:09	26° H 41'59	0°-31'-7
	-1274 Mar 06 j 10:46	0° II		minimum elong	-1269 Mar 29 j 22:03	26° H 45'22	0°31'06
	-1274 May 02 j 23:07	0° S			-1269 Apr 03 j 11:16	0° Y	
	-1274 Jun 21 j 22:35	0° Ω		max. Earth dist.	-1269 May 06 j 14:03	23° Y 05'36	2.52996 AU
	-1274 Aug 07 j 01:32	0° M			-1269 May 16 j 17:43	0° B	
	-1274 Sep 19 j 05:06	0° A		asc. node	-1269 May 21 j 13:07	3° B 14'37	
evening set	-1274 Sep 21 j 10:02	1° A 34'57		morning rise	-1269 May 25 j 19:05	6° B 05'42	
max. Earth dist.	-1274 Oct 07 j 11:56	13° A 15'46	2.43772 AU		-1269 Jul 01 j 03:51	0° II	
desc. node	-1274 Oct 14 j 15:03	18° A 31'03			-1269 Aug 17 j 17:01	0° S	
	-1274 Oct 30 j 00:08	0° M			-1269 Oct 07 j 00:30	0° Ω	
conjunction	-1274 Nov 15 j 14:50	12° M 36'45	0°-21'-10		-1269 Dec 03 j 09:04	0° M	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 14

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

retrograde	-1268 Feb 02 j 23:50	16° $\mathring{\text{M}}$ 49'47			-1263 Jan 29 j 03:29	0° Υ	
opposition	-1268 Mar 10 j 16:39	8° $\mathring{\text{M}}$ 54'09	3°42'11		-1263 Mar 17 j 11:33	0° B	
greatest brilliancy	-1268 Mar 12 j 01:30	8° $\mathring{\text{M}}$ 23'42	-1.7m		-1263 May 04 j 02:36	0° II	
min. Earth dist.	-1268 Mar 18 j 00:50	6° $\mathring{\text{M}}$ 11'26	0.56545 AU	evening set	-1263 Jun 16 j 18:46	27° II 31'32	
	-1268 Apr 10 j 08:30	30° R Ω			-1263 Jun 20 j 16:35	0° S	
direct	-1268 Apr 19 j 20:59	29° Ω 23'26		max. Earth dist.	-1263 Jul 21 j 10:33	19° S 35'28	2.66049 AU
	-1268 Apr 29 j 15:08	0° $\mathring{\text{M}}$					
desc. node	-1268 Jun 05 j 11:57	11° $\mathring{\text{M}}$ 08'54		conjunction	-1263 Aug 01 j 21:07	26° S 57'05	1°10'06
	-1268 Jul 10 j 23:01	0° $\underline{\text{A}}$		minimum elong	-1263 Aug 01 j 21:13	26° S 57'15	1°10'07
	-1268 Aug 25 j 05:44	0° $\mathring{\text{M}}$			-1263 Aug 06 j 14:20	0° Ω	
	-1268 Oct 04 j 21:43	0° X		morning rise	-1263 Sep 15 j 20:18	26° Ω 22'42	
	-1268 Nov 13 j 00:15	0° Z			-1263 Sep 21 j 06:52	0° $\mathring{\text{M}}$	
	-1268 Dec 22 j 02:43	0° \approx			-1263 Nov 04 j 12:19	0° $\underline{\text{A}}$	
	-1267 Jan 31 j 06:03	0° H			-1263 Dec 17 j 08:17	0° $\mathring{\text{M}}$	
	-1267 Mar 14 j 02:13	0° Υ		desc. node	-1262 Jan 26 j 10:05	28° $\mathring{\text{M}}$ 49'10	
evening set	-1267 Mar 25 j 05:41	7° Υ 45'54			-1262 Jan 28 j 01:05	0° X	
asc. node	-1267 Apr 07 j 12:51	16° Υ 54'41			-1262 Mar 10 j 03:37	0° Z	
	-1267 Apr 26 j 20:57	0° B			-1262 Apr 20 j 18:01	0° \approx	
					-1262 Jun 04 j 15:55	0° H	
conjunction	-1267 May 17 j 12:36	13° B 43'40	0°23'00	retrograde	-1262 Aug 19 j 03:23	28° H 58'48	
minimum elong	-1267 May 17 j 11:38	13° B 42'03	0°23'00	min. Earth dist.	-1262 Sep 17 j 01:48	23° H 14'05	0.47970 AU
max. Earth dist.	-1267 Jun 04 j 10:39	25° B 27'42	2.62665 AU	greatest brilliancy	-1262 Sep 23 j 19:53	20° H 48'22	-2.2m
	-1267 Jun 11 j 10:25	0° II		opposition	-1262 Sep 25 j 01:48	20° H 21'22	-3°-11'-46
morning rise	-1267 Jul 05 j 13:08	15° II 30'52		direct	-1262 Oct 28 j 09:35	13° H 21'35	
	-1267 Jul 28 j 07:42	0° S		asc. node	-1262 Nov 28 j 09:00	18° H 45'45	
	-1267 Sep 14 j 03:32	0° Ω			-1262 Dec 26 j 15:51	0° Υ	
	-1267 Nov 02 j 01:49	0° $\mathring{\text{M}}$			-1261 Feb 21 j 15:14	0° B	
	-1267 Dec 23 j 17:39	0° $\underline{\text{A}}$			-1261 Apr 13 j 19:12	0° II	
	-1266 Feb 26 j 17:12	0° $\mathring{\text{M}}$			-1261 Jun 01 j 22:22	0° S	
retrograde	-1266 Mar 31 j 09:29	5° $\mathring{\text{M}}$ 41'50			-1261 Jul 19 j 08:05	0° Ω	
desc. node	-1266 Apr 23 j 11:22	2° $\mathring{\text{M}}$ 26'37		evening set	-1261 Jul 24 j 15:14	3° Ω 25'42	
	-1266 May 01 j 20:31	30° R $\underline{\text{A}}$		max. Earth dist.	-1261 Aug 15 j 22:59	18° Ω 03'59	2.59751 AU
opposition	-1266 May 02 j 23:26	29° $\underline{\text{A}}$ 38'57	0°-34'-54		-1261 Sep 02 j 19:07	0° $\mathring{\text{M}}$	
greatest brilliancy	-1266 May 03 j 06:00	29° $\underline{\text{A}}$ 33'48	-2.5m				
min. Earth dist.	-1266 May 10 j 19:53	27° $\underline{\text{A}}$ 11'08	0.43642 AU	conjunction	-1261 Sep 09 j 13:57	4° $\mathring{\text{M}}$ 35'54	0°52'58
direct	-1266 Jun 07 j 11:23	22° $\underline{\text{A}}$ 22'07		minimum elong	-1261 Sep 09 j 15:19	4° $\mathring{\text{M}}$ 38'13	0°52'58
	-1266 Jul 12 j 11:03	0° $\mathring{\text{M}}$			-1261 Oct 16 j 04:59	0° $\underline{\text{A}}$	
	-1266 Sep 04 j 16:05	0° X		morning rise	-1261 Oct 27 j 18:21	8° $\underline{\text{A}}$ 13'10	
	-1266 Oct 18 j 00:26	0° Z			-1261 Nov 26 j 18:08	0° $\mathring{\text{M}}$	
	-1266 Nov 28 j 14:56	0° \approx		desc. node	-1261 Dec 14 j 09:55	13° $\mathring{\text{M}}$ 06'15	
	-1265 Jan 09 j 14:41	0° H			-1260 Jan 05 j 20:18	0° X	
	-1265 Feb 21 j 21:43	0° Υ			-1260 Feb 14 j 02:03	0° Z	
asc. node	-1265 Feb 23 j 11:10	1° Υ 03'41			-1260 Mar 24 j 06:46	0° \approx	
	-1265 Apr 07 j 18:27	0° B			-1260 May 03 j 12:48	0° H	
evening set	-1265 May 09 j 16:17	20° B 47'23			-1260 Jun 15 j 15:06	0° Υ	
	-1265 May 23 j 23:29	0° II			-1260 Aug 05 j 13:43	0° B	
				retrograde	-1260 Sep 30 j 09:15	16° B 20'39	
conjunction	-1265 Jun 26 j 18:09	21° II 36'21	0°58'57	asc. node	-1260 Oct 15 j 07:51	14° B 45'41	
minimum elong	-1265 Jun 26 j 16:59	21° II 34'30	0°58'57	min. Earth dist.	-1260 Nov 03 j 14:40	8° B 35'28	0.59811 AU
max. Earth dist.	-1265 Jun 28 j 20:23	22° II 56'27	2.67082 AU	opposition	-1260 Nov 08 j 23:54	6° B 27'28	1°02'32
	-1265 Jul 09 j 22:13	0° S		greatest brilliancy	-1260 Nov 08 j 16:01	6° B 35'16	-1.6m
morning rise	-1265 Aug 11 j 03:43	20° S 33'06			-1260 Nov 28 j 03:08	30° R Υ	
	-1265 Aug 25 j 22:15	0° Ω		direct	-1260 Dec 16 j 08:34	27° Υ 48'05	
	-1265 Oct 11 j 12:27	0° $\mathring{\text{M}}$			-1259 Jan 04 j 21:45	0° B	
	-1265 Nov 26 j 15:02	0° $\underline{\text{A}}$			-1259 Mar 19 j 03:16	0° II	
	-1264 Jan 11 j 14:22	0° $\mathring{\text{M}}$			-1259 May 11 j 12:37	0° S	
	-1264 Feb 27 j 09:09	0° X			-1259 Jun 29 j 09:51	0° Ω	
desc. node	-1264 Mar 10 j 11:07	7° X 29'29			-1259 Aug 14 j 05:14	0° $\mathring{\text{M}}$	
	-1264 Apr 18 j 16:37	0° Z		evening set	-1259 Sep 02 j 23:26	13° $\mathring{\text{M}}$ 31'29	
retrograde	-1264 Jun 17 j 13:08	18° Z 41'24		max. Earth dist.	-1259 Sep 17 j 22:44	24° $\mathring{\text{M}}$ 00'40	2.48842 AU
min. Earth dist.	-1264 Jul 15 j 15:20	14° Z 08'05	0.37833 AU		-1259 Sep 26 j 08:49	0° $\underline{\text{A}}$	
opposition	-1264 Jul 18 j 14:12	13° Z 19'50	-6°-46'-41				
greatest brilliancy	-1264 Jul 17 j 18:46	13° Z 33'04	-2.8m	conjunction	-1259 Oct 24 j 16:28	20° $\underline{\text{A}}$ 36'07	0°04'27
direct	-1264 Aug 17 j 05:41	8° Z 21'41		minimum elong	-1259 Oct 24 j 16:43	20° $\underline{\text{A}}$ 36'36	0°04'26
	-1264 Oct 22 j 09:11	0° \approx		behind sun begin	-1259 Oct 23 j 18:26	19° $\underline{\text{A}}$ 55'26	
	-1264 Dec 12 j 12:51	0° H		behind sun end	-1259 Oct 25 j 15:00	21° $\underline{\text{A}}$ 17'48	
asc. node	-1263 Jan 10 j 09:22	18° H 06'37		desc. node	-1259 Oct 31 j 08:39	25° $\underline{\text{A}}$ 33'21	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 15

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1259 Nov 06 j 07:24	0°♌		greatest brilliancy	-1253 Feb 24 j 14:03	22°♏49'17	-1.5m
	-1259 Dec 15 j 15:26	0°♊		min. Earth dist.	-1253 Mar 01 j 09:18	20°♏59'43	0.60643 AU
morning rise	-1259 Dec 21 j 06:33	4°♊21'47		direct	-1253 Apr 05 j 07:11	13°♏26'36	
	-1258 Jan 23 j 02:57	0°♊			-1253 Jun 02 j 06:19	0°♏	
	-1258 Mar 02 j 14:08	0°♏		desc. node	-1253 Jun 23 j 04:51	11°♏07'06	
	-1258 Apr 10 j 22:39	0°♏			-1253 Jul 23 j 21:10	0°♏	
	-1258 May 22 j 04:29	0°♏			-1253 Sep 04 j 23:08	0°♌	
	-1258 Jul 05 j 15:18	0°♏			-1253 Oct 14 j 19:31	0°♊	
	-1258 Aug 25 j 14:21	0°♏			-1253 Nov 22 j 10:32	0°♊	
asc. node	-1258 Sep 02 j 06:22	3°♏54'26			-1253 Dec 31 j 03:41	0°♏	
retrograde	-1258 Nov 05 j 07:52	23°♏04'23			-1252 Feb 08 j 22:17	0°♏	
min. Earth dist.	-1258 Dec 13 j 19:52	13°♏52'15	0.66507 AU	evening set	-1252 Mar 04 j 08:21	17°♏49'16	
opposition	-1258 Dec 15 j 11:29	13°♏12'30	3°30'53		-1252 Mar 21 j 10:21	0°♏	
greatest brilliancy	-1258 Dec 15 j 03:18	13°♏20'43	-1.3m	asc. node	-1252 Apr 24 j 03:55	23°♏22'25	
direct	-1257 Jan 24 j 10:46	3°♏38'32					
	-1257 Apr 16 j 04:26	0°♏		conjunction	-1252 Apr 29 j 18:39	27°♏11'01	0°03'23
	-1257 Jun 08 j 15:03	0°♏		minimum elong	-1252 Apr 29 j 18:30	27°♏10'45	0°03'24
	-1257 Jul 25 j 18:53	0°♏		behind sun begin	-1252 Apr 28 j 20:34	26°♏33'39	
	-1257 Sep 07 j 05:08	0°♏		behind sun end	-1252 Apr 30 j 16:26	27°♏47'50	
desc. node	-1257 Sep 18 j 07:03	7°♏59'19			-1252 May 03 j 22:44	0°♏	
	-1257 Oct 17 j 23:33	0°♌		max. Earth dist.	-1252 May 24 j 23:14	14°♏01'32	2.59489 AU
evening set	-1257 Oct 24 j 14:46	5°♌01'41			-1252 Jun 18 j 09:07	0°♏	
	-1257 Nov 25 j 23:29	0°♊		morning rise	-1252 Jun 20 j 06:31	1°♏13'30	
max. Earth dist.	-1257 Dec 14 j 21:21	14°♊49'58	2.37476 AU		-1252 Aug 04 j 09:40	0°♏	
					-1252 Sep 21 j 21:10	0°♏	
conjunction	-1257 Dec 25 j 16:55	23°♊21'28	0°-56'-38		-1252 Nov 11 j 15:53	0°♏	
minimum elong	-1257 Dec 25 j 14:15	23°♊16'11	0°56'38		-1251 Jan 08 j 21:34	0°♏	
	-1256 Jan 03 j 03:00	0°♏		retrograde	-1251 Mar 06 j 06:10	14°♏38'01	
	-1256 Feb 10 j 08:10	0°♏		opposition	-1251 Apr 09 j 16:35	7°♏45'08	1°38'40
morning rise	-1256 Mar 03 j 23:40	17°♏28'44		greatest brilliancy	-1251 Apr 10 j 13:17	7°♏27'26	-2.1m
	-1256 Mar 20 j 11:55	0°♏		min. Earth dist.	-1251 Apr 18 j 05:18	4°♏50'35	0.48816 AU
	-1256 Apr 30 j 09:07	0°♏			-1251 May 07 j 15:05	30°♏	
	-1256 Jun 12 j 16:01	0°♏		desc. node	-1251 May 10 j 03:08	29°♏41'55	
asc. node	-1256 Jul 20 j 06:09	24°♏26'26		direct	-1251 May 17 j 15:32	29°♏18'34	
	-1256 Jul 29 j 04:28	0°♏			-1251 May 27 j 17:47	0°♏	
	-1256 Sep 19 j 08:52	0°♏			-1251 Aug 05 j 00:42	0°♌	
retrograde	-1256 Dec 09 j 02:04	26°♏35'32			-1251 Sep 18 j 05:31	0°♊	
opposition	-1255 Jan 17 j 14:20	17°♏14'39	4°38'06		-1251 Oct 28 j 22:45	0°♏	
greatest brilliancy	-1255 Jan 17 j 23:43	17°♏05'22	-1.3m		-1251 Dec 08 j 03:13	0°♏	
min. Earth dist.	-1255 Jan 19 j 19:27	16°♏22'05	0.66837 AU		-1250 Jan 18 j 03:19	0°♏	
direct	-1255 Feb 27 j 20:11	7°♏15'14			-1250 Mar 01 j 16:33	0°♏	
	-1255 May 11 j 22:06	0°♏		asc. node	-1250 Mar 12 j 02:59	7°♏10'10	
	-1255 Jul 03 j 00:44	0°♏			-1250 Apr 15 j 00:28	0°♏	
desc. node	-1255 Aug 05 j 05:51	21°♏55'56		evening set	-1250 Apr 23 j 02:43	5°♏21'32	
	-1255 Aug 16 j 20:23	0°♏			-1250 May 30 j 21:33	0°♏	
	-1255 Sep 27 j 00:01	0°♌					
	-1255 Nov 05 j 01:07	0°♊		conjunction	-1250 Jun 11 j 18:42	7°♏39'01	0°47'47
greatest brilliancy	-1255 Dec 11 j 18:42	28°♊53'40	1.2m	minimum elong	-1250 Jun 11 j 17:22	7°♏36'52	0°47'47
	-1255 Dec 13 j 04:21	0°♏		max. Earth dist.	-1250 Jun 19 j 15:20	12°♏41'31	2.66012 AU
evening set	-1255 Dec 30 j 05:07	13°♏24'39			-1250 Jul 16 j 18:04	0°♏	
	-1254 Jan 20 j 10:42	0°♏		morning rise	-1250 Jul 28 j 04:19	7°♏16'03	
	-1254 Feb 28 j 17:42	0°♏			-1250 Sep 01 j 23:19	0°♏	
					-1250 Oct 19 j 05:15	0°♏	
conjunction	-1254 Mar 05 j 22:54	3°♏53'43	0°-51'-19		-1250 Dec 05 j 16:54	0°♏	
minimum elong	-1254 Mar 06 j 01:35	3°♏58'43	0°51'19		-1249 Jan 23 j 11:40	0°♌	
	-1254 Apr 10 j 18:09	0°♏			-1249 Mar 18 j 16:08	0°♊	
max. Earth dist.	-1254 Apr 20 j 19:28	7°♏07'46	2.48007 AU	desc. node	-1249 Mar 28 j 03:16	4°♊25'25	
morning rise	-1254 May 06 j 10:45	18°♏02'42		retrograde	-1249 May 17 j 23:16	17°♊37'34	
	-1254 May 23 j 22:11	0°♏		opposition	-1249 Jun 17 j 05:23	12°♊36'58	-5°-9'-10
asc. node	-1254 Jun 07 j 05:34	9°♏36'17		greatest brilliancy	-1249 Jun 17 j 18:13	12°♊28'22	-2.8m
	-1254 Jul 08 j 10:18	0°♏		min. Earth dist.	-1249 Jun 19 j 18:07	11°♊56'20	0.38017 AU
	-1254 Aug 25 j 13:28	0°♏		direct	-1249 Jul 18 j 01:17	7°♊19'44	
	-1254 Oct 16 j 23:43	0°♏			-1249 Sep 22 j 07:20	0°♏	
	-1254 Dec 30 j 05:11	0°♏			-1249 Nov 09 j 20:18	0°♏	
retrograde	-1253 Jan 16 j 14:27	1°♏43'26			-1249 Dec 25 j 01:25	0°♏	
	-1253 Feb 02 j 01:19	30°♏		asc. node	-1248 Jan 28 j 01:09	22°♏36'05	
opposition	-1253 Feb 23 j 08:46	23°♏17'14	4°21'12		-1248 Feb 08 j 06:17	0°♏	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 16

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1248 Mar 25 j 08:04	0°♄					-1243 Jan 30 j 21:17	0°♅			
	-1248 May 11 j 06:23	0°♂					-1243 Mar 10 j 13:30	0°♁			
evening set	-1248 Jun 01 j 23:52	13°♂47'36					-1243 Apr 19 j 03:16	0°♂			
	-1248 Jun 27 j 12:33	0°♄					-1243 May 30 j 18:34	0°♂			
max. Earth dist.	-1248 Jul 12 j 08:57	9°♄27'15	2.67114 AU				-1243 Jul 15 j 09:47	0°♄			
							-1243 Sep 10 j 12:51	0°♂			
conjunction	-1248 Jul 18 j 12:22	13°♄22'37	1°08'55	asc. node			-1243 Sep 18 j 23:13	3°♂09'56			
minimum elong	-1248 Jul 18 j 11:54	13°♄21'53	1°08'55	retrograde			-1243 Oct 22 j 18:16	9°♂38'14			
	-1248 Aug 13 j 09:51	0°♂		min. Earth dist.			-1243 Nov 28 j 17:24	0°♂56'39	0.64604 AU		
morning rise	-1248 Sep 01 j 06:27	12°♂13'23		opposition			-1243 Dec 01 j 20:40	29°♄41'11	2°44'03		
	-1248 Sep 28 j 08:52	0°♂		greatest brilliancy			-1243 Dec 01 j 09:18	29°♄52'36	-1.4m		
	-1248 Nov 12 j 04:06	0°♄					-1243 Dec 01 j 01:55	30°♄♂			
	-1248 Dec 25 j 21:13	0°♂		direct			-1242 Jan 09 j 23:15	20°♄24'41			
	-1247 Feb 06 j 18:58	0°♄					-1242 Feb 23 j 08:06	0°♂			
desc. node	-1247 Feb 12 j 03:45	3°♄46'24					-1242 Apr 26 j 18:54	0°♄			
	-1247 Mar 21 j 13:44	0°♅					-1242 Jun 16 j 18:41	0°♂			
	-1247 May 05 j 04:08	0°♁					-1242 Aug 02 j 06:07	0°♂			
	-1247 Jul 01 j 14:46	0°♂					-1242 Sep 14 j 12:28	0°♄			
retrograde	-1247 Jul 29 j 02:55	5°♄00'13		evening set			-1242 Oct 02 j 17:20	13°♄11'31			
min. Earth dist.	-1247 Aug 25 j 04:05	0°♄05'50	0.42973 AU	desc. node			-1242 Oct 04 j 23:50	14°♄51'36			
	-1247 Aug 25 j 11:27	30°♄♁		max. Earth dist.			-1242 Oct 22 j 16:39	28°♄01'30	2.41082 AU		
greatest brilliancy	-1247 Aug 31 j 03:59	28°♄08'40	-2.5m				-1242 Oct 25 j 07:40	0°♂			
opposition	-1247 Sep 01 j 21:49	27°♄34'13	-5°-11'-31								
direct	-1247 Oct 03 j 11:10	21°♄28'45		conjunction			-1242 Nov 29 j 05:39	26°♂44'54	0°-35'-35		
	-1247 Nov 11 j 19:07	0°♂		minimum elong			-1242 Nov 29 j 03:19	26°♂40'23	0°35'34		
asc. node	-1247 Dec 14 j 23:30	15°♄12'07					-1242 Dec 03 j 09:58	0°♄			
	-1246 Jan 11 j 05:20	0°♂					-1241 Jan 10 j 15:36	0°♅			
	-1246 Mar 03 j 08:13	0°♄		morning rise			-1241 Feb 03 j 08:52	18°♄38'33			
	-1246 Apr 21 j 16:07	0°♂					-1241 Feb 17 j 22:00	0°♁			
	-1246 Jun 09 j 01:04	0°♄					-1241 Mar 29 j 02:16	0°♂			
evening set	-1246 Jul 09 j 19:42	19°♄28'37					-1241 May 09 j 00:28	0°♂			
	-1246 Jul 26 j 04:33	0°♂					-1241 Jun 21 j 13:12	0°♄			
max. Earth dist.	-1246 Aug 05 j 13:26	6°♂44'11	2.62826 AU	asc. node			-1241 Aug 06 j 21:38	29°♄20'08			
							-1241 Aug 08 j 00:22	0°♂			
conjunction	-1246 Aug 25 j 01:10	19°♂33'08	1°03'13				-1241 Oct 03 j 18:02	0°♄			
minimum elong	-1246 Aug 25 j 02:08	19°♂34'45	1°03'14	retrograde			-1241 Nov 26 j 10:04	13°♄48'10			
	-1246 Sep 09 j 16:35	0°♂		opposition			-1240 Jan 05 j 07:29	4°♄12'38	4°20'58		
morning rise	-1246 Oct 10 j 09:45	20°♂57'59		greatest brilliancy			-1240 Jan 05 j 08:57	4°♄11'10	-1.2m		
	-1246 Oct 23 j 08:47	0°♄		min. Earth dist.			-1240 Jan 06 j 00:17	3°♄55'53	0.67484 AU		
	-1246 Dec 04 j 07:54	0°♂					-1240 Jan 16 j 06:07	30°♄♂			
desc. node	-1246 Dec 31 j 02:17	19°♂41'23		direct			-1240 Feb 15 j 05:15	24°♂20'02			
	-1245 Jan 13 j 22:07	0°♄					-1240 Mar 19 j 03:18	0°♄			
	-1245 Feb 22 j 16:30	0°♅					-1240 May 23 j 08:28	0°♂			
	-1245 Apr 03 j 11:05	0°♁					-1240 Jul 11 j 16:26	0°♂			
	-1245 May 14 j 13:49	0°♂		desc. node			-1240 Aug 21 j 22:36	27°♂59'37			
	-1245 Jun 28 j 21:04	0°♂					-1240 Aug 24 j 18:38	0°♄			
retrograde	-1245 Sep 15 j 21:21	29°♂56'54					-1240 Oct 04 j 17:02	0°♂			
min. Earth dist.	-1245 Oct 18 j 02:41	22°♂55'21	0.55601 AU				-1240 Nov 12 j 16:46	0°♄			
opposition	-1245 Oct 24 j 19:29	20°♂19'32	0°-22'-18	evening set			-1240 Dec 02 j 10:06	15°♄29'31			
greatest brilliancy	-1245 Oct 24 j 16:10	20°♂22'45	-1.8m				-1240 Dec 20 j 19:09	0°♅			
asc. node	-1245 Nov 01 j 23:21	17°♂18'03					-1239 Jan 27 j 23:57	0°♁			
direct	-1245 Nov 29 j 18:14	12°♂12'38									
	-1244 Jan 31 j 18:14	0°♄		conjunction			-1239 Feb 07 j 03:53	7°♄52'45	-1°-4'-12		
	-1244 Mar 29 j 07:32	0°♂		minimum elong			-1239 Feb 07 j 05:19	7°♄55'30	1°04'14		
	-1244 May 19 j 11:00	0°♄					-1239 Mar 08 j 04:28	0°♂			
	-1244 Jul 06 j 14:46	0°♂		max. Earth dist.			-1239 Mar 29 j 20:56	16°♄05'26	2.42657 AU		
evening set	-1244 Aug 17 j 03:37	27°♂15'02		morning rise			-1239 Apr 14 j 08:33	27°♄19'37			
	-1244 Aug 21 j 05:30	0°♂					-1239 Apr 18 j 02:01	0°♂			
max. Earth dist.	-1244 Sep 03 j 00:24	8°♂42'45	2.53559 AU				-1239 May 31 j 04:59	0°♄			
	-1244 Oct 03 j 10:40	0°♄		asc. node			-1239 Jun 23 j 21:02	15°♄45'45			
							-1239 Jul 15 j 22:07	0°♂			
conjunction	-1244 Oct 05 j 09:31	1°♄23'33	0°26'51				-1239 Sep 03 j 00:04	0°♄			
minimum elong	-1244 Oct 05 j 10:42	1°♄25'39	0°26'50				-1239 Oct 29 j 09:36	0°♂			
	-1244 Nov 13 j 13:59	0°♂		retrograde			-1239 Dec 31 j 19:14	17°♄43'03			
desc. node	-1244 Nov 17 j 00:46	2°♂34'27		opposition			-1238 Feb 08 j 09:39	8°♂52'06	4°39'42		
morning rise	-1244 Nov 27 j 08:17	10°♂19'18		greatest brilliancy			-1238 Feb 09 j 08:00	8°♂30'23	-1.4m		
	-1244 Dec 23 j 04:01	0°♄		min. Earth dist.			-1238 Feb 12 j 23:29	7°♂05'32	0.63829 AU		

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 17

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1238 Mar 08 j 12:51	30° RE		conjunction	-1233 Jul 05 j 03:26	29° $\text{II}52'54$	1°03'44
direct	-1238 Mar 21 j 16:37	28° $\text{E}52'26$		minimum elong	-1233 Jul 05 j 02:29	29° $\text{II}51'24$	1°03'45
	-1238 Apr 04 j 09:18	0° Ω			-1233 Jul 05 j 07:53	0° E	
	-1238 Jun 16 j 06:52	0° M		morning rise	-1233 Aug 19 j 04:12	28° $\text{E}39'09$	
desc. node	-1238 Jul 09 j 21:14	14° $\text{M}17'29$			-1233 Aug 21 j 06:33	0° Ω	
	-1238 Aug 02 j 17:33	0° A			-1233 Oct 06 j 14:31	0° M	
	-1238 Sep 13 j 17:34	0° M			-1233 Nov 21 j 04:10	0° A	
	-1238 Oct 23 j 03:18	0° X			-1232 Jan 05 j 03:39	0° M	
	-1238 Nov 30 j 11:43	0° E			-1232 Feb 19 j 01:36	0° X	
	-1237 Jan 07 j 23:01	0° \approx		desc. node	-1232 Feb 29 j 19:38	7° $\text{X}06'23$	
evening set	-1237 Feb 09 j 21:19	25° $\approx04'18$			-1232 Apr 05 j 11:18	0° E	
	-1237 Feb 16 j 11:39	0° X			-1232 Jun 01 j 12:56	0° \approx	
	-1237 Mar 29 j 17:38	0° Y		retrograde	-1232 Jul 03 j 21:52	6° $\approx33'12$	
				min. Earth dist.	-1232 Jul 30 j 15:52	2° $\approx07'14$	0.39065 AU
conjunction	-1237 Apr 11 j 02:18	8° $\text{Y}42'40$	0°-18'-25	greatest brilliancy	-1232 Aug 03 j 15:42	0° $\approx58'39$	-2.8m
minimum elong	-1237 Apr 11 j 03:23	8° $\text{Y}44'35$	0°18'25	opposition	-1232 Aug 05 j 02:22	0° $\approx33'42$	-6°-39'-54
asc. node	-1237 May 11 j 20:25	29° $\text{Y}51'57$			-1232 Aug 07 j 01:34	30° RE	
	-1237 May 12 j 01:11	0° X		direct	-1232 Sep 04 j 00:39	25° $\text{E}19'51$	
max. Earth dist.	-1237 May 14 j 02:47	1° $\text{X}23'47$	2.55518 AU		-1232 Oct 01 j 23:04	0° \approx	
morning rise	-1237 Jun 04 j 20:12	15° $\text{X}53'44$			-1232 Dec 03 j 19:32	0° X	
	-1237 Jun 26 j 10:01	0° II		asc. node	-1232 Dec 31 j 16:18	16° $\text{X}29'36$	
	-1237 Aug 12 j 16:50	0° E			-1231 Jan 22 j 18:26	0° Y	
	-1237 Oct 01 j 04:04	0° Ω			-1231 Mar 12 j 02:13	0° X	
	-1237 Nov 24 j 04:15	0° M			-1231 Apr 29 j 04:55	0° II	
retrograde	-1236 Feb 13 j 18:58	26° $\text{M}31'57$			-1231 Jun 16 j 00:41	0° E	
opposition	-1236 Mar 20 j 19:09	18° $\text{M}56'12$	3°07'17	evening set	-1231 Jun 25 j 04:32	5° $\text{E}47'41$	
greatest brilliancy	-1236 Mar 22 j 02:57	18° $\text{M}27'23$	-1.9m	max. Earth dist.	-1231 Jul 26 j 22:46	26° $\text{E}05'02$	2.65130 AU
min. Earth dist.	-1236 Mar 28 j 18:21	16° $\text{M}03'36$	0.53952 AU		-1231 Aug 02 j 00:21	0° Ω	
direct	-1236 Apr 29 j 09:27	9° $\text{M}42'29$					
desc. node	-1236 May 26 j 21:02	14° $\text{M}18'30$		conjunction	-1231 Aug 10 j 04:57	5° $\Omega18'54$	1°08'50
	-1236 Jul 01 j 13:00	0° A		minimum elong	-1231 Aug 10 j 05:24	5° $\Omega19'37$	1°08'51
	-1236 Aug 18 j 11:33	0° M			-1231 Sep 16 j 15:18	0° M	
	-1236 Sep 28 j 23:07	0° X		morning rise	-1231 Sep 24 j 11:55	5° $\text{M}16'27$	
	-1236 Nov 07 j 11:15	0° E			-1231 Oct 30 j 16:00	0° A	
	-1236 Dec 16 j 20:20	0° \approx			-1231 Dec 12 j 03:50	0° M	
	-1235 Jan 26 j 05:06	0° X		desc. node	-1230 Jan 16 j 19:04	25° $\text{M}52'28$	
	-1235 Mar 09 j 05:40	0° Y			-1230 Jan 22 j 09:49	0° X	
asc. node	-1235 Mar 28 j 18:02	13° $\text{Y}29'11$			-1230 Mar 03 j 22:06	0° E	
evening set	-1235 Apr 05 j 05:34	18° $\text{Y}35'15$			-1230 Apr 13 j 15:20	0° \approx	
	-1235 Apr 22 j 03:57	0° X			-1230 May 26 j 11:46	0° X	
					-1230 Jul 17 j 07:32	0° Y	
conjunction	-1235 May 27 j 00:54	23° $\text{X}00'40$	0°33'05	retrograde	-1230 Aug 29 j 19:07	11° $\text{Y}18'57$	
minimum elong	-1235 May 26 j 23:41	22° $\text{X}58'41$	0°33'04	min. Earth dist.	-1230 Sep 28 j 21:41	5° $\text{Y}06'10$	0.50789 AU
	-1235 Jun 06 j 19:08	0° II		opposition	-1230 Oct 06 j 14:58	2° $\text{Y}13'45$	-2°-5'-24
max. Earth dist.	-1235 Jun 10 j 05:36	2° $\text{II}13'21$	2.64103 AU	greatest brilliancy	-1230 Oct 05 j 19:03	2° $\text{Y}32'18$	-2.1m
morning rise	-1235 Jul 13 j 22:47	23° $\text{II}50'23$			-1230 Oct 12 j 19:43	30° RX	
	-1235 Jul 23 j 15:18	0° E		direct	-1230 Nov 09 j 22:27	24° $\text{X}47'26$	
	-1235 Sep 09 j 04:36	0° Ω		asc. node	-1230 Nov 18 j 15:25	25° $\text{X}15'56$	
	-1235 Oct 27 j 09:06	0° M			-1230 Dec 10 j 11:58	0° Y	
	-1235 Dec 16 j 01:38	0° A			-1229 Feb 14 j 11:57	0° X	
	-1234 Feb 09 j 01:10	0° M			-1229 Apr 08 j 06:27	0° II	
desc. node	-1234 Apr 13 j 20:11	19° $\text{M}42'23$			-1229 May 28 j 00:06	0° E	
retrograde	-1234 Apr 16 j 07:07	19° $\text{M}44'38$			-1229 Jul 14 j 15:47	0° Ω	
opposition	-1234 May 17 j 23:13	14° $\text{M}09'11$	-2°-11'-7	evening set	-1229 Aug 02 j 08:47	12° $\Omega09'25$	
greatest brilliancy	-1234 May 18 j 17:10	13° $\text{M}55'51$	-2.6m	max. Earth dist.	-1229 Aug 22 j 12:45	25° $\Omega31'46$	2.57733 AU
min. Earth dist.	-1234 May 24 j 14:28	12° $\text{M}11'34$	0.41136 AU		-1229 Aug 29 j 04:13	0° M	
direct	-1234 Jun 20 j 17:46	7° $\text{M}38'00$					
	-1234 Aug 24 j 08:49	0° X		conjunction	-1229 Sep 18 j 22:33	14° $\text{M}11'06$	0°44'47
	-1234 Oct 10 j 04:26	0° E		minimum elong	-1229 Sep 18 j 23:59	14° $\text{M}13'35$	0°44'47
	-1234 Nov 22 j 03:13	0° \approx			-1229 Oct 11 j 12:51	0° A	
	-1233 Jan 03 j 21:38	0° X		morning rise	-1229 Nov 07 j 12:10	19° $\text{A}23'43$	
asc. node	-1233 Feb 13 j 16:43	27° $\text{X}58'46$			-1229 Nov 21 j 22:42	0° M	
	-1233 Feb 16 j 16:32	0° Y		desc. node	-1229 Dec 04 j 17:39	9° $\text{M}30'35$	
	-1233 Apr 02 j 21:17	0° X			-1229 Dec 31 j 20:38	0° X	
evening set	-1233 May 18 j 18:04	29° $\text{X}39'07$			-1228 Feb 08 j 21:32	0° E	
	-1233 May 19 j 07:07	0° II			-1228 Mar 18 j 20:44	0° \approx	
max. Earth dist.	-1233 Jul 04 j 05:00	29° $\text{II}17'11$	2.67332 AU		-1228 Apr 27 j 18:51	0° X	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 18

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1228 Jun 09 j 03:01	0°♊					-1223 May 02 j 16:02	0°♏			
	-1228 Jul 27 j 03:14	0°♉					-1223 Jun 26 j 23:22	0°♍			
asc. node	-1228 Oct 05 j 14:21	25°♏21'28		desc. node	-1223 Jul 26 j 14:51	19°♍06'12					
retrograde	-1228 Oct 08 j 18:10	25°♏25'31			-1223 Aug 11 j 13:15	0°♌					
min. Earth dist.	-1228 Nov 13 j 00:08	17°♏18'53	0.61762 AU		-1223 Sep 21 j 23:21	0°♋					
opposition	-1228 Nov 17 j 14:33	15°♏28'50	1°44'10		-1223 Oct 31 j 03:17	0°♊					
greatest brilliancy	-1228 Nov 17 j 03:44	15°♏39'37	-1.5m		-1223 Dec 08 j 07:49	0°♐					
direct	-1228 Dec 25 j 15:50	6°♏34'33		evening set	-1222 Jan 14 j 17:34	29°♐18'27					
	-1227 Mar 11 j 09:04	0°♐			-1222 Jan 15 j 15:00	0°♑					
	-1227 May 05 j 22:07	0°♑			-1222 Feb 23 j 22:53	0°♒					
	-1227 Jun 24 j 10:55	0°♑									
	-1227 Aug 09 j 11:43	0°♑		conjunction	-1222 Mar 19 j 20:35	17°♒38'52	0°-40'-14				
evening set	-1227 Sep 13 j 05:59	23°♑59'51		minimum elong	-1222 Mar 19 j 22:58	17°♒43'13	0°40'13				
	-1227 Sep 21 j 16:33	0°♑			-1222 Apr 05 j 23:58	0°♑					
max. Earth dist.	-1227 Sep 28 j 03:59	4°♑39'07	2.46041 AU	max. Earth dist.	-1222 Apr 30 j 07:25	17°♑05'08	2.50826 AU				
desc. node	-1227 Oct 21 j 16:04	21°♑51'00		morning rise	-1222 May 17 j 18:27	29°♑03'23					
	-1227 Nov 01 j 14:04	0°♒			-1222 May 19 j 03:51	0°♒					
				asc. node	-1222 May 28 j 11:03	6°♒16'06					
conjunction	-1227 Nov 05 j 18:25	3°♒08'44	0°-10'-2		-1222 Jul 03 j 13:12	0°♐					
minimum elong	-1227 Nov 05 j 17:48	3°♒07'33	0°10'04		-1222 Aug 20 j 06:29	0°♑					
behind sun begin	-1227 Nov 04 j 22:35	2°♒31'23			-1222 Oct 10 j 06:42	0°♑					
behind sun end	-1227 Nov 06 j 13:00	3°♒43'45			-1222 Dec 10 j 06:58	0°♑					
	-1227 Dec 10 j 20:13	0°♊		retrograde	-1221 Jan 26 j 06:21	10°♑37'36					
morning rise	-1226 Jan 05 j 10:06	19°♊57'13		opposition	-1221 Mar 04 j 11:45	2°♑27'32	4°01'09				
	-1226 Jan 18 j 05:33	0°♐		greatest brilliancy	-1221 Mar 05 j 19:33	1°♑57'40	-1.6m				
greatest brilliancy	-1226 Feb 02 j 14:52	12°♐03'58	1.2m	min. Earth dist.	-1221 Mar 11 j 06:57	29°♑54'40	0.58486 AU				
	-1226 Feb 25 j 14:38	0°♑			-1221 Mar 11 j 01:11	30°♒♏					
	-1226 Apr 05 j 20:54	0°♒		direct	-1221 Apr 14 j 02:05	22°♒46'18					
	-1226 May 16 j 22:23	0°♑			-1221 May 19 j 21:59	0°♑					
	-1226 Jun 29 j 21:43	0°♒		desc. node	-1221 Jun 13 j 12:52	10°♑54'45					
	-1226 Aug 18 j 01:19	0°♐			-1221 Jul 16 j 19:44	0°♑					
asc. node	-1226 Aug 23 j 13:54	3°♐02'57			-1221 Aug 30 j 00:58	0°♒					
	-1226 Oct 31 j 08:42	0°♑			-1221 Oct 09 j 08:09	0°♊					
retrograde	-1226 Nov 12 j 23:54	0°♑58'54			-1221 Nov 17 j 05:07	0°♐					
	-1226 Nov 25 j 03:45	30°♒♐			-1221 Dec 26 j 02:31	0°♑					
min. Earth dist.	-1226 Dec 22 j 07:16	21°♐31'22	0.67136 AU		-1220 Feb 04 j 00:49	0°♒					
opposition	-1226 Dec 23 j 02:40	21°♐11'56	3°52'35	evening set	-1220 Mar 16 j 11:33	29°♒52'26					
greatest brilliancy	-1226 Dec 22 j 21:24	21°♐17'12	-1.3m		-1220 Mar 16 j 15:51	0°♑					
direct	-1225 Feb 01 j 11:29	11°♐30'09		asc. node	-1220 Apr 14 j 10:40	19°♑57'18					
	-1225 Apr 07 j 22:24	0°♑			-1220 Apr 29 j 06:22	0°♒					
	-1225 Jun 02 j 22:03	0°♑									
	-1225 Jul 20 j 17:44	0°♑		conjunction	-1220 May 10 j 02:28	7°♒15'27	0°15'03				
	-1225 Sep 02 j 09:31	0°♑		minimum elong	-1220 May 10 j 01:46	7°♒14'17	0°15'03				
desc. node	-1225 Sep 08 j 15:56	4°♑29'33		behind sun begin	-1220 May 09 j 19:19	7°♒03'33					
	-1225 Oct 13 j 05:19	0°♒		behind sun end	-1220 May 10 j 08:12	7°♒25'00					
evening set	-1225 Nov 07 j 05:27	19°♒07'25		max. Earth dist.	-1220 May 31 j 05:54	21°♒13'17	2.61338 AU				
	-1225 Nov 21 j 05:07	0°♊			-1220 Jun 13 j 17:08	0°♐					
	-1225 Dec 29 j 07:48	0°♐		morning rise	-1220 Jun 29 j 03:30	9°♐57'30					
					-1220 Jul 30 j 14:54	0°♑					
conjunction	-1224 Jan 10 j 16:34	9°♐45'25	-1°-3'-41		-1220 Sep 16 j 16:18	0°♑					
minimum elong	-1224 Jan 10 j 14:59	9°♐42'17	1°03'42		-1220 Nov 05 j 06:38	0°♑					
	-1224 Feb 05 j 12:08	0°♑			-1220 Dec 28 j 23:27	0°♑					
max. Earth dist.	-1224 Feb 14 j 18:01	7°♑10'36	2.38003 AU	retrograde	-1219 Mar 19 j 22:25	26°♑31'53					
	-1224 Mar 15 j 15:22	0°♒		opposition	-1219 Apr 22 j 08:18	20°♑05'56	0°28'29				
morning rise	-1224 Mar 19 j 22:35	3°♒13'41		greatest brilliancy	-1219 Apr 22 j 14:50	20°♑00'35	-2.3m				
	-1224 Apr 25 j 11:33	0°♑		desc. node	-1219 Apr 30 j 12:05	17°♑25'37					
	-1224 Jun 07 j 15:27	0°♒		min. Earth dist.	-1219 Apr 30 j 16:37	17°♑22'01	0.45913 AU				
asc. node	-1224 Jul 10 j 12:08	21°♒36'37		direct	-1219 May 29 j 00:58	12°♑14'55					
	-1224 Jul 23 j 17:55	0°♐			-1219 Jul 24 j 15:09	0°♒					
	-1224 Sep 12 j 09:22	0°♑			-1219 Sep 10 j 12:37	0°♊					
	-1224 Nov 18 j 09:56	0°♑			-1219 Oct 22 j 11:06	0°♐					
retrograde	-1224 Dec 17 j 03:14	4°♑27'43			-1219 Dec 02 j 07:30	0°♑					
	-1223 Jan 12 j 13:53	30°♒♑			-1218 Jan 12 j 18:43	0°♒					
opposition	-1223 Jan 25 j 09:13	25°♑16'29	4°42'20		-1218 Feb 24 j 16:02	0°♑					
greatest brilliancy	-1223 Jan 25 j 23:17	25°♑02'39	-1.3m	asc. node	-1218 Mar 02 j 09:04	3°♑54'27					
min. Earth dist.	-1223 Jan 28 j 10:52	24°♑04'05	0.66059 AU		-1218 Apr 10 j 05:44	0°♒					
direct	-1223 Mar 07 j 17:26	15°♑15'24		evening set	-1218 May 02 j 17:21	14°♒45'22					

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 19

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1218 May 26 j 06:10	0°II				-1213 May 08 j 03:31	0°H		
						-1213 Jun 20 j 21:06	0°Y		
conjunction	-1218 Jun 20 j 10:45	16°II09'32	0°54'43			-1213 Aug 14 j 07:20	0°B		
minimum elong	-1218 Jun 20 j 09:29	16°II07'31	0°54'43	retrograde		-1213 Sep 24 j 22:09	9°B58'04		
max. Earth dist.	-1218 Jun 25 j 00:47	19°II05'18	2.66705 AU	asc. node		-1213 Oct 23 j 06:02	4°B25'09		
	-1218 Jul 12 j 03:27	0°S		min. Earth dist.		-1213 Oct 28 j 06:32	2°B31'40	0.58035 AU	
morning rise	-1218 Aug 05 j 05:40	15°S20'37		opposition		-1213 Nov 03 j 06:20	0°B10'29	0°28'57	
	-1218 Aug 28 j 05:29	0°Q		greatest brilliancy		-1213 Nov 03 j 02:07	0°B14'37	-1.7m	
	-1218 Oct 14 j 02:12	0°M				-1213 Nov 03 j 17:02	30°R'Y		
	-1218 Nov 29 j 18:07	0°A		direct		-1213 Dec 10 j 01:08	21°Y44'31		
	-1217 Jan 15 j 18:08	0°M				-1212 Jan 19 j 05:59	0°B		
	-1217 Mar 05 j 18:00	0°J				-1212 Mar 22 j 20:34	0°II		
desc. node	-1217 Mar 18 j 12:03	7°J17'29				-1212 May 14 j 05:21	0°S		
	-1217 May 06 j 02:56	0°Z				-1212 Jul 01 j 19:45	0°Q		
retrograde	-1217 Jun 04 j 23:08	5°Z17'52				-1212 Aug 16 j 14:14	0°M		
opposition	-1217 Jul 05 j 09:17	0°Z14'10	-6°-20'-43	evening set		-1212 Aug 26 j 13:26	6°M46'06		
greatest brilliancy	-1217 Jul 05 j 05:39	0°Z16'35	-2.9m	max. Earth dist.		-1212 Sep 11 j 01:29	17°M28'20	2.51022 AU	
min. Earth dist.	-1217 Jul 04 j 20:46	0°Z22'30	0.37513 AU			-1212 Sep 28 j 19:52	0°A		
	-1217 Jul 06 j 06:34	30°R'J							
direct	-1217 Aug 04 j 07:34	25°J15'45		conjunction		-1212 Oct 16 j 01:14	12°A24'45	0°14'31	
	-1217 Aug 31 j 22:29	0°Z		minimum elong		-1212 Oct 16 j 01:58	12°A26'06	0°14'30	
	-1217 Oct 31 j 10:03	0°≈		behind sun begin		-1212 Oct 15 j 15:44	12°A07'29		
	-1217 Dec 18 j 04:00	0°H		behind sun end		-1212 Oct 16 j 12:13	12°A44'43		
asc. node	-1216 Jan 18 j 07:19	20°H09'07		desc. node		-1212 Nov 07 j 09:46	28°A53'26		
	-1216 Feb 02 j 12:25	0°Y				-1212 Nov 08 j 21:26	0°M		
	-1216 Mar 20 j 05:03	0°B		morning rise		-1212 Dec 10 j 09:47	23°M52'51		
	-1216 May 06 j 11:37	0°II				-1212 Dec 18 j 08:42	0°J		
evening set	-1216 Jun 10 j 12:22	22°II08'35				-1211 Jan 25 j 22:47	0°Z		
	-1216 Jun 22 j 21:58	0°S				-1211 Mar 05 j 11:31	0°≈		
max. Earth dist.	-1216 Jul 17 j 16:23	15°S46'19	2.66627 AU			-1211 Apr 13 j 21:08	0°H		
						-1211 May 25 j 04:52	0°Y		
conjunction	-1216 Jul 26 j 17:52	21°S34'44	1°10'06			-1211 Jul 08 j 23:19	0°B		
minimum elong	-1216 Jul 26 j 17:43	21°S34'31	1°10'06			-1211 Aug 30 j 13:20	0°II		
	-1216 Aug 08 j 19:43	0°Q		asc. node		-1211 Sep 09 j 04:20	4°II30'13		
morning rise	-1216 Sep 09 j 13:23	20°Q41'09		retrograde		-1211 Oct 30 j 14:24	17°II52'52		
	-1216 Sep 23 j 15:30	0°M		min. Earth dist.		-1211 Dec 07 j 10:51	8°II53'40	0.65789 AU	
	-1216 Nov 07 j 03:27	0°A		opposition		-1211 Dec 09 j 18:11	7°II58'09	3°12'56	
	-1216 Dec 20 j 08:34	0°M		greatest brilliancy		-1211 Dec 09 j 08:11	8°II08'11	-1.3m	
	-1215 Jan 31 j 13:23	0°J				-1210 Jan 03 j 05:21	30°R'B		
desc. node	-1215 Feb 02 j 10:54	1°J21'37		direct		-1210 Jan 18 j 08:55	28°B31'15		
	-1215 Mar 14 j 06:52	0°Z				-1210 Feb 03 j 09:36	0°II		
	-1215 Apr 25 j 20:29	0°≈				-1210 Apr 20 j 02:23	0°S		
	-1215 Jun 12 j 09:38	0°H				-1210 Jun 11 j 10:54	0°Q		
retrograde	-1215 Aug 10 j 09:45	19°H29'14				-1210 Jul 28 j 08:47	0°M		
min. Earth dist.	-1215 Sep 07 j 10:39	14°H08'06	0.45676 AU			-1210 Sep 09 j 18:47	0°A		
greatest brilliancy	-1215 Sep 13 j 23:34	11°H52'18	-2.3m	desc. node		-1210 Sep 25 j 08:19	11°A14'52		
opposition	-1215 Sep 15 j 12:07	11°H20'28	-4°-3'-54	evening set		-1210 Oct 14 j 18:08	25°A36'15		
direct	-1215 Oct 18 j 00:05	4°H44'20				-1210 Oct 20 j 14:32	0°M		
asc. node	-1215 Dec 05 j 07:01	16°H41'15		max. Earth dist.		-1210 Nov 13 j 16:54	18°M23'10	2.38737 AU	
	-1214 Jan 02 j 08:30	0°Y				-1210 Nov 28 j 16:13	0°J		
	-1214 Feb 25 j 04:55	0°B							
	-1214 Apr 16 j 11:36	0°II		conjunction		-1210 Dec 13 j 18:45	11°J49'23	0°-48'-32	
	-1214 Jun 04 j 06:42	0°S		minimum elong		-1210 Dec 13 j 15:55	11°J43'48	0°48'32	
evening set	-1214 Jul 18 j 06:00	27°S50'38				-1209 Jan 05 j 20:51	0°Z		
	-1214 Jul 21 j 14:16	0°Q				-1209 Feb 13 j 02:04	0°≈		
max. Earth dist.	-1214 Aug 11 j 11:11	13°Q36'03	2.61220 AU	morning rise		-1209 Feb 20 j 03:17	5°≈28'38		
						-1209 Mar 24 j 05:05	0°H		
conjunction	-1214 Sep 02 j 19:18	28°Q27'01	0°57'52			-1209 May 04 j 01:12	0°Y		
minimum elong	-1214 Sep 02 j 20:31	28°Q29'04	0°57'52			-1209 Jun 16 j 08:20	0°B		
	-1214 Sep 05 j 02:35	0°M		asc. node		-1209 Jul 28 j 04:03	26°B57'38		
	-1214 Oct 18 j 16:11	0°A				-1209 Aug 02 j 02:47	0°II		
morning rise	-1214 Oct 20 j 01:49	0°A59'14				-1209 Sep 24 j 14:29	0°S		
	-1214 Nov 29 j 10:16	0°M		retrograde		-1209 Dec 04 j 04:58	21°S35'50		
desc. node	-1214 Dec 21 j 10:35	16°M16'07		opposition		-1208 Jan 12 j 22:20	12°S08'01	4°32'13	
	-1213 Jan 08 j 18:01	0°J		greatest brilliancy		-1208 Jan 13 j 04:08	12°S02'16	-1.2m	
	-1213 Feb 17 j 05:06	0°Z		min. Earth dist.		-1208 Jan 14 j 11:33	11°S31'05	0.67260 AU	
	-1213 Mar 28 j 14:48	0°≈		direct		-1208 Feb 23 j 01:37	2°S10'59		

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 20

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1208 May 16 j 07:05	0°♈			-1203 Jun 02 j 03:57	0°♊		
	-1208 Jul 06 j 03:45	0°♍						
desc. node	-1208 Aug 12 j 07:04	24°♍48'26		conjunction	-1203 Jun 05 j 03:27	1°♊55'33	0°42'01	
	-1208 Aug 19 j 17:05	0°♊		minimum elong	-1203 Jun 05 j 02:07	1°♊53'24	0°42'01	
	-1208 Sep 29 j 19:20	0°♌		max. Earth dist.	-1203 Jun 15 j 20:10	8°♊49'00	2.65258 AU	
	-1208 Nov 07 j 20:25	0°♌			-1203 Jul 18 j 23:42	0°♍		
	-1208 Dec 15 j 23:18	0°♍		morning rise	-1203 Jul 22 j 03:43	2°♍00'49		
evening set	-1208 Dec 17 j 23:56	1°♍35'59			-1203 Sep 04 j 07:55	0°♈		
	-1207 Jan 23 j 04:23	0°♌			-1203 Oct 21 j 22:47	0°♍		
					-1203 Dec 09 j 06:08	0°♊		
conjunction	-1207 Feb 22 j 14:11	23°♌21'49	0°-58'-8		-1202 Jan 28 j 23:49	0°♌		
minimum elong	-1207 Feb 22 j 16:40	23°♌26'32	0°58'09		-1202 Apr 02 j 21:05	0°♌		
	-1207 Mar 03 j 09:22	0°♌		desc. node	-1202 Apr 04 j 04:16	0°♌24'20		
max. Earth dist.	-1207 Apr 12 j 10:37	29°♌23'05	2.45627 AU	retrograde	-1202 May 03 j 18:58	5°♌19'26		
	-1207 Apr 13 j 07:15	0°♌		opposition	-1202 Jun 03 j 12:11	0°♌07'57	-3°-54'-45	
morning rise	-1207 Apr 27 j 06:09	9°♌53'45			-1202 Jun 03 j 23:39	30°♌		
	-1207 May 26 j 09:10	0°♌		greatest brilliancy	-1202 Jun 04 j 08:01	29°♌54'11	-2.8m	
asc. node	-1207 Jun 14 j 03:51	12°♌34'53		min. Earth dist.	-1202 Jun 08 j 04:43	28°♌49'59	0.39102 AU	
	-1207 Jul 10 j 21:35	0°♊		direct	-1202 Jul 05 j 12:39	24°♌22'04		
	-1207 Aug 28 j 07:35	0°♍			-1202 Aug 04 j 09:36	0°♌		
	-1207 Oct 20 j 23:08	0°♈			-1202 Sep 30 j 15:07	0°♍		
retrograde	-1206 Jan 09 j 15:16	26°♈04'31			-1202 Nov 14 j 22:44	0°♌		
opposition	-1206 Feb 16 j 19:48	17°♈26'37	4°30'44		-1202 Dec 28 j 20:29	0°♌		
greatest brilliancy	-1206 Feb 17 j 22:15	17°♈01'10	-1.4m	asc. node	-1201 Feb 03 j 23:35	25°♌05'45		
min. Earth dist.	-1206 Feb 22 j 05:32	15°♈22'03	0.62197 AU		-1201 Feb 11 j 07:47	0°♌		
direct	-1206 Mar 29 j 23:37	7°♈30'43			-1201 Mar 28 j 22:34	0°♌		
	-1206 Jun 08 j 03:13	0°♍			-1201 May 14 j 14:23	0°♊		
desc. node	-1206 Jun 30 j 05:57	12°♍33'22		evening set	-1201 May 27 j 13:06	8°♊14'59		
	-1206 Jul 27 j 16:23	0°♊			-1201 Jun 30 j 17:53	0°♍		
	-1206 Sep 08 j 07:03	0°♌		max. Earth dist.	-1201 Jul 09 j 12:27	5°♍35'14	2.67321 AU	
	-1206 Oct 17 j 22:57	0°♌						
	-1206 Nov 25 j 10:49	0°♍		conjunction	-1201 Jul 13 j 09:20	8°♍03'15	1°07'12	
	-1205 Jan 03 j 00:30	0°♌		minimum elong	-1201 Jul 13 j 08:40	8°♍02'11	1°07'13	
	-1205 Feb 11 j 15:18	0°♌			-1201 Aug 16 j 15:50	0°♈		
evening set	-1205 Feb 23 j 11:48	8°♌44'49		morning rise	-1201 Aug 27 j 04:57	6°♈48'12		
	-1205 Mar 24 j 23:20	0°♌			-1201 Oct 01 j 19:10	0°♍		
					-1201 Nov 15 j 22:34	0°♊		
conjunction	-1205 Apr 22 j 13:29	19°♌56'13	0°-5'-44		-1201 Dec 30 j 04:15	0°♌		
minimum elong	-1205 Apr 22 j 13:48	19°♌56'45	0°05'45		-1200 Feb 11 j 20:25	0°♌		
behind sun begin	-1205 Apr 21 j 16:08	19°♌19'33		desc. node	-1200 Feb 20 j 04:55	5°♌44'41		
behind sun end	-1205 Apr 23 j 11:28	20°♌33'54			-1200 Mar 26 j 19:49	0°♍		
asc. node	-1205 May 02 j 02:10	26°♌26'40			-1200 May 13 j 04:28	0°♌		
	-1205 May 07 j 08:07	0°♌		retrograde	-1200 Jul 18 j 17:46	23°♌32'06		
max. Earth dist.	-1205 May 21 j 03:25	9°♌15'50	2.57808 AU	min. Earth dist.	-1200 Aug 14 j 08:44	18°♌54'46	0.41002 AU	
morning rise	-1205 Jun 14 j 09:44	25°♌15'41		greatest brilliancy	-1200 Aug 19 j 15:20	17°♌17'19	-2.6m	
	-1205 Jun 21 j 16:32	0°♊		opposition	-1200 Aug 21 j 08:58	16°♌44'55	-5°-57'-55	
	-1205 Aug 07 j 18:32	0°♍		direct	-1200 Sep 21 j 03:51	11°♌04'24		
	-1205 Sep 25 j 14:06	0°♈			-1200 Nov 22 j 14:13	0°♌		
	-1205 Nov 16 j 10:47	0°♍		asc. node	-1200 Dec 21 j 21:56	15°♌37'33		
	-1204 Jan 19 j 17:42	0°♊			-1199 Jan 15 j 18:24	0°♌		
retrograde	-1204 Feb 25 j 13:41	6°♊57'08			-1199 Mar 06 j 11:17	0°♌		
	-1204 Mar 30 j 23:18	30°♌			-1199 Apr 24 j 05:12	0°♊		
opposition	-1204 Mar 31 j 17:30	29°♌44'04	2°21'04		-1199 Jun 11 j 08:18	0°♍		
greatest brilliancy	-1204 Apr 01 j 20:41	29°♌20'07	-2.0m	evening set	-1199 Jul 03 j 13:32	14°♍03'05		
min. Earth dist.	-1204 Apr 09 j 02:18	26°♌47'43	0.51165 AU		-1199 Jul 28 j 10:31	0°♈		
direct	-1204 May 09 j 12:27	20°♌53'30		max. Earth dist.	-1199 Aug 01 j 13:13	2°♈39'43	2.63963 AU	
desc. node	-1204 May 17 j 04:23	21°♌17'19						
	-1204 Jun 17 j 22:36	0°♊		conjunction	-1199 Aug 18 j 15:05	13°♈48'29	1°06'07	
	-1204 Aug 10 j 19:08	0°♌		minimum elong	-1199 Aug 18 j 15:51	13°♈49'44	1°06'07	
	-1204 Sep 22 j 13:51	0°♌			-1199 Sep 12 j 00:39	0°♍		
	-1204 Nov 01 j 16:31	0°♍		morning rise	-1199 Oct 03 j 10:11	14°♍29'06		
	-1204 Dec 11 j 10:46	0°♌			-1199 Oct 25 j 21:24	0°♊		
	-1203 Jan 21 j 02:25	0°♌			-1199 Dec 07 j 02:45	0°♌		
	-1203 Mar 04 j 08:25	0°♌		desc. node	-1198 Jan 07 j 03:24	22°♌41'33		
asc. node	-1203 Mar 19 j 00:58	10°♌08'06			-1198 Jan 17 j 00:04	0°♌		
evening set	-1203 Apr 15 j 14:23	28°♌46'17			-1198 Feb 26 j 01:57	0°♍		
	-1203 Apr 17 j 10:34	0°♌			-1198 Apr 07 j 04:36	0°♌		

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 21

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1198 May 18 j 20:28	0° H				-1193 Aug 28 j 11:46	0° A	
	-1198 Jul 04 j 19:31	0° Y		desc. node		-1193 Aug 29 j 23:48	1° A 04'02	
retrograde	-1198 Sep 08 j 18:49	22° Y 39'32				-1193 Oct 08 j 10:13	0° M	
min. Earth dist.	-1198 Oct 10 j 01:06	15° Y 59'37	0.53499 AU			-1193 Nov 16 j 10:38	0° J	
opposition	-1198 Oct 17 j 06:30	13° Y 14'19	-1°-3'-54	evening set		-1193 Nov 21 j 16:33	4° J 06'15	
greatest brilliancy	-1198 Oct 16 j 20:36	13° Y 23'45	-1.9m			-1193 Dec 24 j 13:20	0° Z	
asc. node	-1198 Nov 08 j 21:25	6° Y 28'39						
direct	-1198 Nov 21 j 12:57	5° Y 24'26		conjunction		-1192 Jan 26 j 19:09	26° Z 09'14	-1°-5'-51
	-1197 Feb 06 j 07:54	0° B		minimum elong		-1192 Jan 26 j 19:18	26° Z 09'32	1°05'52
	-1197 Apr 02 j 11:34	0° II				-1192 Jan 31 j 17:26	0° \approx	
	-1197 May 22 j 23:59	0° S				-1192 Mar 10 j 20:18	0° H	
	-1197 Jul 09 j 23:07	0° Q		max. Earth dist.		-1192 Mar 15 j 08:13	3° H 22'32	2.40352 AU
evening set	-1197 Aug 11 j 06:36	21° Q 05'19		morning rise		-1192 Apr 03 j 17:15	17° H 43'37	
	-1197 Aug 24 j 13:55	0° M				-1192 Apr 20 j 15:54	0° Y	
max. Earth dist.	-1197 Aug 29 j 10:42	3° M 17'38	2.55508 AU			-1192 Jun 02 j 17:22	0° B	
				asc. node		-1192 Jun 30 j 18:51	18° B 37'20	
conjunction	-1197 Sep 28 j 16:02	24° M 10'49	0°35'04			-1192 Jul 18 j 12:17	0° II	
minimum elong	-1197 Sep 28 j 17:23	24° M 13'12	0°35'03			-1192 Sep 06 j 01:32	0° S	
	-1197 Oct 06 j 21:41	0° A				-1192 Nov 04 j 02:56	0° Q	
	-1197 Nov 17 j 04:44	0° M		retrograde		-1192 Dec 25 j 09:56	12° Q 27'22	
morning rise	-1197 Nov 18 j 22:46	1° M 18'04		opposition		-1191 Feb 02 j 08:19	3° Q 26'56	4°42'16
desc. node	-1197 Nov 25 j 01:57	5° M 52'26		greatest brilliancy		-1191 Feb 03 j 03:06	3° Q 08'36	-1.3m
	-1197 Dec 26 j 22:42	0° J		min. Earth dist.		-1191 Feb 06 j 06:32	1° Q 54'59	0.64946 AU
	-1196 Feb 03 j 19:30	0° Z				-1191 Feb 11 j 07:20	30° R S	
	-1196 Mar 13 j 14:17	0° \approx		direct		-1191 Mar 15 j 17:02	23° S 25'46	
	-1196 Apr 22 j 06:23	0° H				-1191 Apr 19 j 18:46	0° Q	
	-1196 Jun 03 j 02:19	0° Y				-1191 Jun 20 j 09:10	0° M	
	-1196 Jul 19 j 09:36	0° B		desc. node		-1191 Jul 16 j 22:04	16° M 32'43	
	-1196 Sep 20 j 14:55	0° II				-1191 Aug 06 j 00:01	0° A	
asc. node	-1196 Sep 25 j 21:19	1° II 24'42				-1191 Sep 16 j 18:46	0° M	
retrograde	-1196 Oct 16 j 21:15	4° II 07'33				-1191 Oct 26 j 02:23	0° J	
	-1196 Nov 10 j 10:13	30° R B				-1191 Dec 03 j 09:08	0° Z	
min. Earth dist.	-1196 Nov 22 j 02:34	25° B 40'55	0.63444 AU			-1190 Jan 10 j 18:05	0° \approx	
opposition	-1196 Nov 25 j 21:25	24° B 10'01	2°20'48	evening set		-1190 Jan 29 j 19:11	14° \approx 38'15	
greatest brilliancy	-1196 Nov 25 j 09:37	24° B 21'50	-1.4m			-1190 Feb 19 j 03:35	0° H	
direct	-1195 Jan 03 j 13:05	15° B 02'44						
	-1195 Mar 02 j 02:15	0° II		conjunction		-1190 Apr 01 j 19:13	0° Y 23'14	0°-27'-54
	-1195 Apr 30 j 00:33	0° S		minimum elong		-1190 Apr 01 j 20:55	0° Y 26'14	0°27'54
	-1195 Jun 19 j 09:33	0° Q				-1190 Apr 01 j 06:10	0° Y	
	-1195 Aug 04 j 17:42	0° M		max. Earth dist.		-1190 May 08 j 10:50	25° Y 55'39	2.53500 AU
	-1195 Sep 17 j 00:46	0° A				-1190 May 14 j 10:32	0° B	
evening set	-1195 Sep 24 j 00:29	5° A 01'02		asc. node		-1190 May 18 j 18:36	2° B 55'54	
max. Earth dist.	-1195 Oct 10 j 11:26	17° A 01'05	2.43263 AU	morning rise		-1190 May 28 j 07:07	9° B 19'16	
desc. node	-1195 Oct 12 j 01:00	18° A 10'20				-1190 Jun 28 j 18:10	0° II	
	-1195 Oct 27 j 22:01	0° M				-1190 Aug 15 j 03:43	0° S	
						-1190 Oct 04 j 03:20	0° Q	
conjunction	-1195 Nov 18 j 15:00	16° M 29'42	0°-24'-42			-1190 Nov 29 j 05:00	0° M	
minimum elong	-1195 Nov 18 j 13:23	16° M 26'36	0°24'42	retrograde		-1189 Feb 05 j 12:16	19° M 55'39	
	-1195 Dec 06 j 02:31	0° J		opposition		-1189 Mar 14 j 02:19	12° M 03'43	3°33'14
	-1194 Jan 13 j 09:54	0° Z		greatest brilliancy		-1189 Mar 15 j 10:58	11° M 33'36	-1.7m
morning rise	-1194 Jan 21 j 10:10	6° Z 17'53		min. Earth dist.		-1189 Mar 21 j 14:15	9° M 18'12	0.56070 AU
	-1194 Feb 20 j 16:59	0° \approx		direct		-1189 Apr 23 j 05:26	2° M 35'30	
	-1194 Mar 31 j 21:04	0° H		desc. node		-1189 Jun 03 j 21:44	12° M 17'18	
	-1194 May 11 j 19:13	0° Y				-1189 Jul 08 j 16:04	0° A	
	-1194 Jun 24 j 09:52	0° B				-1189 Aug 23 j 16:36	0° M	
	-1194 Aug 11 j 08:39	0° II				-1189 Oct 03 j 14:22	0° J	
asc. node	-1194 Aug 13 j 19:55	1° II 26'17				-1189 Nov 11 j 19:02	0° Z	
	-1194 Oct 10 j 10:36	0° S				-1189 Dec 20 j 21:53	0° \approx	
retrograde	-1194 Nov 20 j 16:49	8° S 49'16				-1188 Jan 30 j 00:36	0° H	
	-1194 Dec 28 j 13:27	30° R II				-1188 Mar 11 j 19:38	0° Y	
opposition	-1194 Dec 30 j 17:14	29° II 08'22	4°10'29	evening set		-1188 Mar 27 j 23:37	11° Y 14'54	
greatest brilliancy	-1194 Dec 30 j 15:34	29° II 10'02	-1.2m	asc. node		-1188 Apr 04 j 16:12	16° Y 31'53	
min. Earth dist.	-1194 Dec 30 j 18:13	29° II 07'23	0.67453 AU			-1188 Apr 24 j 13:04	0° B	
direct	-1193 Feb 09 j 09:48	19° II 20'02						
	-1193 Mar 28 j 12:30	0° S		conjunction		-1188 May 19 j 22:44	16° B 52'25	0°25'52
	-1193 May 27 j 19:35	0° Q		minimum elong		-1188 May 19 j 21:40	16° B 50'40	0°25'52
	-1193 Jul 15 j 12:39	0° M		max. Earth dist.		-1188 Jun 06 j 05:04	28° B 09'17	2.62979 AU

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 22

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1188 Jun 09 j 01:17	0°♄		min. Earth dist.	-1183 Sep 19 j 21:25	26°♄55'15	0.48502 AU
morning rise	-1188 Jul 07 j 17:15	18°♄26'31		opposition	-1183 Sep 27 j 21:59	24°♄01'06	-2°-54'-51
	-1188 Jul 25 j 21:15	0°♄		greatest brilliancy	-1183 Sep 26 j 18:20	24°♄26'10	-2.2m
	-1188 Sep 11 j 14:55	0°♄		direct	-1183 Oct 31 j 10:40	16°♄56'09	
	-1188 Oct 30 j 08:12	0°♄		asc. node	-1183 Nov 25 j 13:40	20°♄36'28	
	-1188 Dec 20 j 09:34	0°♄			-1183 Dec 21 j 18:14	0°♄	
	-1187 Feb 19 j 07:28	0°♄			-1182 Feb 18 j 12:58	0°♄	
retrograde	-1187 Apr 03 j 17:58	9°♄32'07			-1182 Apr 11 j 02:35	0°♄	
desc. node	-1187 Apr 20 j 21:09	7°♄42'55			-1182 May 30 j 10:07	0°♄	
opposition	-1187 May 06 j 05:02	3°♄34'03	0°-56'-47		-1182 Jul 16 j 22:47	0°♄	
greatest brilliancy	-1187 May 06 j 15:03	3°♄26'14	-2.5m	evening set	-1182 Jul 26 j 20:18	6°♄24'08	
min. Earth dist.	-1187 May 13 j 21:12	1°♄11'10	0.43161 AU	max. Earth dist.	-1182 Aug 17 j 18:20	20°♄48'16	2.59388 AU
	-1187 May 17 j 23:14	30°♄			-1182 Aug 31 j 12:16	0°♄	
direct	-1187 Jun 10 j 08:22	26°♄25'18					
	-1187 Jul 03 j 17:30	0°♄		conjunction	-1182 Sep 11 j 21:09	7°♄42'35	0°50'54
	-1187 Sep 01 j 07:53	0°♄		minimum elong	-1182 Sep 11 j 22:32	7°♄44'56	0°50'53
	-1187 Oct 15 j 07:50	0°♄			-1182 Oct 14 j 00:04	0°♄	
	-1187 Nov 26 j 03:37	0°♄		morning rise	-1182 Oct 30 j 07:07	11°♄36'00	
	-1186 Jan 07 j 05:12	0°♄			-1182 Nov 24 j 14:30	0°♄	
	-1186 Feb 19 j 12:33	0°♄		desc. node	-1182 Dec 11 j 18:38	12°♄43'53	
asc. node	-1186 Feb 20 j 14:28	0°♄44'05			-1181 Jan 03 j 17:12	0°♄	
	-1186 Apr 05 j 09:02	0°♄			-1181 Feb 11 j 22:38	0°♄	
evening set	-1186 May 12 j 00:43	23°♄51'20			-1181 Mar 23 j 01:48	0°♄	
	-1186 May 21 j 13:51	0°♄			-1181 May 02 j 04:18	0°♄	
					-1181 Jun 13 j 22:19	0°♄	
conjunction	-1186 Jun 28 j 22:41	24°♄31'55	1°00'25		-1181 Aug 02 j 14:10	0°♄	
minimum elong	-1186 Jun 28 j 21:35	24°♄30'10	1°00'26	retrograde	-1181 Oct 03 j 13:36	19°♄24'57	
max. Earth dist.	-1186 Jun 30 j 09:35	25°♄27'31	2.67163 AU	asc. node	-1181 Oct 13 j 12:11	18°♄43'14	
	-1186 Jul 07 j 12:39	0°♄		min. Earth dist.	-1181 Nov 06 j 23:41	11°♄35'26	0.60197 AU
morning rise	-1186 Aug 13 j 05:54	23°♄25'05		opposition	-1181 Nov 12 j 05:01	9°♄31'11	1°14'38
	-1186 Aug 23 j 12:44	0°♄		greatest brilliancy	-1181 Nov 11 j 20:01	9°♄40'07	-1.6m
	-1186 Oct 09 j 02:20	0°♄		direct	-1181 Dec 19 j 17:18	0°♄48'37	
	-1186 Nov 24 j 02:44	0°♄			-1180 Mar 15 j 17:47	0°♄	
	-1185 Jan 08 j 21:00	0°♄			-1180 May 08 j 18:59	0°♄	
	-1185 Feb 24 j 04:16	0°♄			-1180 Jun 26 j 22:36	0°♄	
desc. node	-1185 Mar 08 j 20:25	7°♄59'44			-1180 Aug 11 j 21:54	0°♄	
	-1185 Apr 14 j 20:46	0°♄		evening set	-1180 Sep 05 j 10:44	16°♄47'57	
retrograde	-1185 Jun 22 j 08:21	23°♄25'22		max. Earth dist.	-1180 Sep 20 j 05:16	27°♄11'06	2.48302 AU
min. Earth dist.	-1185 Jul 20 j 00:35	18°♄55'23	0.38005 AU		-1180 Sep 24 j 04:12	0°♄	
opposition	-1185 Jul 23 j 12:39	17°♄57'56	-6°-49'-7				
greatest brilliancy	-1185 Jul 22 j 13:54	18°♄13'30	-2.8m	conjunction	-1180 Oct 27 j 11:56	24°♄15'55	0°00'49
direct	-1185 Aug 22 j 02:58	12°♄58'01		minimum elong	-1180 Oct 27 j 11:58	24°♄15'58	0°00'49
	-1185 Oct 18 j 13:26	0°♄		behind sun begin	-1180 Oct 26 j 12:56	23°♄33'16	
	-1185 Dec 10 j 09:44	0°♄		behind sun end	-1180 Oct 28 j 11:00	24°♄58'43	
asc. node	-1184 Jan 08 j 14:19	18°♄07'43		desc. node	-1180 Oct 28 j 17:10	25°♄10'10	
	-1184 Jan 27 j 10:31	0°♄			-1180 Nov 04 j 04:35	0°♄	
	-1184 Mar 14 j 22:19	0°♄			-1180 Dec 13 j 13:32	0°♄	
	-1184 May 01 j 15:08	0°♄		morning rise	-1180 Dec 24 j 15:52	8°♄36'23	
evening set	-1184 Jun 18 j 23:04	0°♄26'12			-1179 Jan 21 j 01:11	0°♄	
	-1184 Jun 18 j 06:30	0°♄			-1179 Feb 28 j 11:36	0°♄	
max. Earth dist.	-1184 Jul 23 j 03:00	22°♄11'56	2.65909 AU		-1179 Apr 08 j 18:18	0°♄	
					-1179 May 19 j 20:47	0°♄	
conjunction	-1184 Aug 04 j 00:11	29°♄51'07	1°09'52		-1179 Jul 03 j 00:54	0°♄	
minimum elong	-1184 Aug 04 j 00:23	29°♄51'28	1°09'52		-1179 Aug 22 j 04:03	0°♄	
	-1184 Aug 04 j 05:40	0°♄		asc. node	-1179 Aug 30 j 11:49	4°♄22'24	
morning rise	-1184 Sep 18 j 00:16	29°♄21'17		retrograde	-1179 Nov 07 j 07:35	25°♄53'15	
	-1184 Sep 18 j 23:31	0°♄		min. Earth dist.	-1179 Dec 16 j 00:11	16°♄37'38	0.66658 AU
	-1184 Nov 02 j 05:42	0°♄		opposition	-1179 Dec 17 j 11:18	16°♄02'27	3°37'30
	-1184 Dec 15 j 01:31	0°♄		greatest brilliancy	-1179 Dec 17 j 03:38	16°♄10'07	-1.3m
desc. node	-1183 Jan 23 j 19:45	28°♄37'33		direct	-1178 Jan 26 j 12:28	6°♄26'40	
	-1183 Jan 25 j 17:04	0°♄			-1178 Apr 12 j 15:20	0°♄	
	-1183 Mar 07 j 16:47	0°♄			-1178 Jun 05 j 22:32	0°♄	
	-1183 Apr 18 j 00:59	0°♄			-1178 Jul 23 j 09:57	0°♄	
	-1183 Jun 01 j 04:59	0°♄			-1178 Sep 05 j 00:23	0°♄	
	-1183 Aug 01 j 18:56	0°♄		desc. node	-1178 Sep 15 j 16:49	7°♄40'41	
retrograde	-1183 Aug 21 j 18:08	2°♄44'19			-1178 Oct 15 j 21:12	0°♄	
	-1183 Sep 10 j 05:12	30°♄		evening set	-1178 Oct 27 j 15:58	8°♄56'22	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 23

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1178 Nov 23 j 22:15	0°♂		morning rise	-1173 Jun 23 j 13:26	4°♂15'09	
max. Earth dist.	-1178 Dec 25 j 14:09	24°♂52'56	2.37322 AU		-1173 Aug 02 j 22:13	0°♂	
					-1173 Sep 20 j 06:04	0°♂	
conjunction	-1178 Dec 29 j 07:00	27°♂48'12	0°-58'-41		-1173 Nov 09 j 15:36	0°♂	
minimum elong	-1178 Dec 29 j 04:29	27°♂43'14	0°58'42		-1172 Jan 05 j 05:43	0°♂	
	-1177 Jan 01 j 01:48	0°♂		retrograde	-1172 Mar 09 j 07:22	18°♂06'15	
	-1177 Feb 08 j 06:08	0°♂		opposition	-1172 Apr 12 j 12:29	11°♂18'15	1°22'16
morning rise	-1177 Mar 08 j 17:32	21°♂57'26		greatest brilliancy	-1172 Apr 13 j 06:13	11°♂03'10	-2.2m
	-1177 Mar 19 j 08:17	0°♂		min. Earth dist.	-1172 Apr 21 j 00:08	8°♂25'25	0.48268 AU
	-1177 Apr 29 j 03:08	0°♂		desc. node	-1172 May 07 j 13:05	4°♂04'31	
	-1177 Jun 11 j 06:36	0°♂		direct	-1172 May 20 j 05:38	2°♂57'26	
asc. node	-1177 Jul 18 j 10:35	24°♂17'28			-1172 Aug 01 j 12:59	0°♂	
	-1177 Jul 27 j 13:06	0°♂			-1172 Sep 15 j 13:18	0°♂	
	-1177 Sep 17 j 00:57	0°♂			-1172 Oct 26 j 12:42	0°♂	
retrograde	-1177 Dec 12 j 02:56	29°♂23'38			-1172 Dec 05 j 19:28	0°♂	
opposition	-1176 Jan 20 j 14:49	20°♂04'40	4°39'22		-1171 Jan 15 j 20:06	0°♂	
greatest brilliancy	-1176 Jan 21 j 01:12	19°♂54'25	-1.3m		-1171 Feb 27 j 08:56	0°♂	
min. Earth dist.	-1176 Jan 23 j 00:35	19°♂07'38	0.66731 AU	asc. node	-1171 Mar 09 j 07:24	6°♂50'01	
direct	-1176 Mar 01 j 21:38	10°♂04'42			-1171 Apr 12 j 16:02	0°♂	
	-1176 May 08 j 04:57	0°♂		evening set	-1171 Apr 25 j 12:40	8°♂30'18	
	-1176 Jun 30 j 08:57	0°♂			-1171 May 28 j 12:18	0°♂	
desc. node	-1176 Aug 02 j 16:02	21°♂47'53					
	-1176 Aug 14 j 12:57	0°♂		conjunction	-1171 Jun 13 j 23:58	10°♂36'44	0°49'49
	-1176 Sep 24 j 20:42	0°♂		minimum elong	-1171 Jun 13 j 22:38	10°♂34'36	0°49'50
	-1176 Nov 02 j 23:46	0°♂		max. Earth dist.	-1171 Jun 21 j 07:26	15°♂17'51	2.66157 AU
greatest brilliancy	-1176 Nov 30 j 10:02	21°♂32'17	1.2m		-1171 Jul 14 j 08:10	0°♂	
	-1176 Dec 11 j 03:29	0°♂		morning rise	-1171 Jul 30 j 06:30	10°♂08'09	
evening set	-1175 Jan 02 j 16:50	17°♂45'20			-1171 Aug 30 j 12:37	0°♂	
	-1175 Jan 18 j 09:08	0°♂			-1171 Oct 16 j 16:45	0°♂	
	-1175 Feb 26 j 14:32	0°♂			-1171 Dec 02 j 23:57	0°♂	
					-1170 Jan 20 j 07:35	0°♂	
conjunction	-1175 Mar 09 j 06:10	7°♂56'43	0°-48'-43		-1170 Mar 13 j 19:22	0°♂	
minimum elong	-1175 Mar 09 j 08:52	8°♂01'44	0°48'42	desc. node	-1170 Mar 25 j 13:16	5°♂51'53	
	-1175 Apr 08 j 12:49	0°♂		retrograde	-1170 May 21 j 21:00	22°♂10'40	
max. Earth dist.	-1175 Apr 23 j 06:07	10°♂26'02	2.48545 AU	opposition	-1170 Jun 21 j 03:08	17°♂10'54	-5°-28'-21
morning rise	-1175 May 09 j 06:24	21°♂34'13		greatest brilliancy	-1170 Jun 21 j 13:41	17°♂03'50	-2.8m
	-1175 May 21 j 14:16	0°♂		min. Earth dist.	-1170 Jun 23 j 02:39	16°♂39'06	0.37844 AU
asc. node	-1175 Jun 04 j 09:03	9°♂16'45		direct	-1170 Jul 21 j 19:19	11°♂58'31	
	-1175 Jul 05 j 23:18	0°♂			-1170 Sep 17 j 13:40	0°♂	
	-1175 Aug 22 j 21:23	0°♂			-1170 Nov 06 j 17:20	0°♂	
	-1175 Oct 13 j 18:04	0°♂			-1170 Dec 22 j 08:46	0°♂	
	-1175 Dec 20 j 04:42	0°♂		asc. node	-1169 Jan 25 j 05:43	22°♂26'13	
retrograde	-1174 Jan 18 j 21:51	4°♂41'48			-1169 Feb 05 j 17:30	0°♂	
	-1174 Feb 15 j 08:06	30°♂41'48			-1169 Mar 23 j 20:48	0°♂	
opposition	-1174 Feb 25 j 14:29	26°♂18'41	4°15'46		-1169 May 09 j 19:56	0°♂	
greatest brilliancy	-1174 Feb 26 j 20:19	25°♂50'20	-1.5m	evening set	-1169 Jun 05 j 04:17	16°♂42'45	
min. Earth dist.	-1174 Mar 03 j 19:34	23°♂57'19	0.60264 AU		-1169 Jun 26 j 02:52	0°♂	
direct	-1174 Apr 07 j 12:25	16°♂29'25		max. Earth dist.	-1169 Jul 14 j 19:41	11°♂54'16	2.67039 AU
	-1174 May 28 j 20:58	0°♂					
desc. node	-1174 Jun 20 j 14:03	11°♂33'40		conjunction	-1169 Jul 21 j 15:01	16°♂15'10	1°09'21
	-1174 Jul 21 j 02:53	0°♂		minimum elong	-1169 Jul 21 j 14:39	16°♂14'35	1°09'22
	-1174 Sep 02 j 14:35	0°♂			-1169 Aug 12 j 00:54	0°♂	
	-1174 Oct 12 j 14:58	0°♂		morning rise	-1169 Sep 04 j 09:12	15°♂08'24	
	-1174 Nov 20 j 07:35	0°♂			-1169 Sep 27 j 00:23	0°♂	
	-1174 Dec 29 j 00:50	0°♂			-1169 Nov 10 j 19:20	0°♂	
	-1173 Feb 06 j 18:31	0°♂			-1169 Dec 24 j 11:06	0°♂	
evening set	-1173 Mar 08 j 06:13	21°♂29'34			-1168 Feb 05 j 06:00	0°♂	
	-1173 Mar 20 j 04:59	0°♂		desc. node	-1168 Feb 10 j 12:03	3°♂42'28	
asc. node	-1173 Apr 22 j 08:38	23°♂01'15			-1168 Mar 18 j 19:03	0°♂	
	-1173 May 02 j 15:26	0°♂			-1168 May 01 j 18:36	0°♂	
					-1168 Jun 23 j 21:32	0°♂	
conjunction	-1173 May 03 j 08:39	0°♂29'03	0°06'35	retrograde	-1168 Jul 31 j 23:44	9°♂07'56	
minimum elong	-1173 May 03 j 08:18	0°♂28'28	0°06'35	min. Earth dist.	-1168 Aug 28 j 06:37	4°♂08'37	0.43462 AU
behind sun begin	-1173 May 02 j 11:52	29°♂53'59		greatest brilliancy	-1168 Sep 03 j 09:15	2°♂07'26	-2.5m
behind sun end	-1173 May 04 j 04:45	1°♂02'54		opposition	-1168 Sep 05 j 02:16	1°♂33'17	-4°-56'-16
max. Earth dist.	-1173 May 27 j 17:14	16°♂43'50	2.59850 AU		-1168 Sep 09 j 21:46	30°♂	
	-1173 Jun 16 j 23:52	0°♂		direct	-1168 Oct 06 j 18:34	25°♂22'05	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 24

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1168 Nov 03 j 22:13	0° H			-1163 Dec 01 j 09:19	0° Z		
asc. node	-1168 Dec 12 j 05:17	15° H 54'52						
	-1167 Jan 07 j 20:41	0° Y		conjunction	-1163 Dec 02 j 09:38	0° Z 47'20	0°-38'-49	
	-1167 Feb 28 j 13:35	0° B		minimum elong	-1163 Dec 02 j 07:09	0° Z 42'31	0°38'49	
	-1167 Apr 19 j 02:34	0° II			-1162 Jan 08 j 15:15	0° Z		
	-1167 Jun 06 j 14:24	0° S		morning rise	-1162 Feb 07 j 01:03	23° Z 06'36		
evening set	-1167 Jul 11 j 22:37	22° S 21'07			-1162 Feb 15 j 20:56	0° \approx		
	-1167 Jul 23 j 20:12	0° Ω			-1162 Mar 26 j 23:26	0° H		
max. Earth dist.	-1167 Aug 07 j 06:34	9° Ω 22'16	2.62542 AU		-1162 May 06 j 18:48	0° Y		
					-1162 Jun 19 j 02:57	0° B		
conjunction	-1167 Aug 27 j 05:11	22° Ω 30'41	1°01'54	asc. node	-1162 Aug 04 j 02:02	29° B 19'09		
minimum elong	-1167 Aug 27 j 06:14	22° Ω 32'26	1°01'53		-1162 Aug 05 j 05:06	0° II		
	-1167 Sep 07 j 10:12	0° M			-1162 Sep 29 j 11:34	0° S		
morning rise	-1167 Oct 12 j 17:45	24° M 07'39		retrograde	-1162 Nov 28 j 10:22	16° S 36'36		
	-1167 Oct 21 j 03:42	0° $\underline{\text{A}}$		opposition	-1161 Jan 07 j 07:33	7° S 02'37	4°24'27	
	-1167 Dec 02 j 03:21	0° M		greatest brilliancy	-1161 Jan 07 j 09:56	7° S 00'15	-1.2m	
desc. node	-1167 Dec 28 j 11:20	19° M 22'16		min. Earth dist.	-1161 Jan 08 j 04:56	6° S 41'20	0.67477 AU	
	-1166 Jan 11 j 17:14	0° Z			-1161 Jan 27 j 04:38	30° R II		
	-1166 Feb 20 j 10:27	0° Z		direct	-1161 Feb 17 j 06:40	27° II 08'49		
	-1166 Apr 01 j 02:31	0° \approx			-1161 Mar 11 j 22:38	0° S		
	-1166 May 11 j 23:49	0° H			-1161 May 21 j 05:57	0° Ω		
	-1166 Jun 25 j 15:43	0° Y			-1161 Jul 10 j 04:07	0° M		
	-1166 Aug 26 j 22:36	0° B		desc. node	-1161 Aug 20 j 07:58	27° M 45'22		
retrograde	-1166 Sep 18 j 05:05	3° B 12'49			-1161 Aug 23 j 12:24	0° $\underline{\text{A}}$		
	-1166 Oct 09 j 09:22	30° R Y			-1161 Oct 03 j 14:05	0° M		
min. Earth dist.	-1166 Oct 20 j 15:25	26° Y 06'11	0.56100 AU		-1161 Nov 11 j 15:28	0° Z		
opposition	-1166 Oct 27 j 04:49	23° Y 33'21	0°-8'-6	evening set	-1161 Dec 06 j 21:09	19° Z 49'43		
greatest brilliancy	-1165 Feb 24 j 06:27	13° B 19'30	-3.0m		-1161 Dec 19 j 18:17	0° Z		
asc. node	-1166 Oct 30 j 04:25	22° Y 24'29			-1160 Jan 26 j 22:33	0° \approx		
direct	-1166 Dec 02 j 08:27	15° Y 22'17						
	-1165 Jan 27 j 07:08	0° B		conjunction	-1160 Feb 11 j 16:48	12° \approx 12'24	-1°-3'-5	
	-1165 Mar 27 j 08:10	0° II		minimum elong	-1160 Feb 11 j 18:32	12° \approx 15'45	1°03'06	
	-1165 May 17 j 20:43	0° S			-1160 Mar 06 j 01:42	0° H		
	-1165 Jul 05 j 05:11	0° Ω		max. Earth dist.	-1160 Apr 02 j 07:45	20° H 11'40	2.43219 AU	
	-1165 Aug 19 j 23:17	0° M			-1160 Apr 15 j 21:10	0° Y		
evening set	-1165 Aug 20 j 09:50	0° M 17'47		morning rise	-1160 Apr 17 j 10:55	1° Y 07'36		
max. Earth dist.	-1165 Sep 05 j 21:39	11° M 32'09	2.53107 AU		-1160 May 28 j 21:18	0° B		
	-1165 Oct 02 j 06:58	0° $\underline{\text{A}}$		asc. node	-1160 Jun 21 j 01:55	15° B 30'05		
					-1160 Jul 13 j 10:21	0° II		
conjunction	-1165 Oct 08 j 20:29	4° $\underline{\text{A}}$ 41'05	0°23'50		-1160 Aug 31 j 04:27	0° S		
minimum elong	-1165 Oct 08 j 21:34	4° $\underline{\text{A}}$ 43'02	0°23'49		-1160 Oct 25 j 10:10	0° Ω		
	-1165 Nov 12 j 11:56	0° M		retrograde	-1159 Jan 02 j 23:30	20° Ω 37'00		
desc. node	-1165 Nov 15 j 11:03	2° M 12'30		opposition	-1159 Feb 10 j 12:50	11° Ω 48'32	4°37'10	
morning rise	-1165 Dec 01 j 05:22	14° M 03'43		greatest brilliancy	-1159 Feb 11 j 12:03	11° Ω 26'02	-1.4m	
	-1165 Dec 22 j 02:40	0° Z		min. Earth dist.	-1159 Feb 15 j 07:12	9° Ω 57'49	0.63555 AU	
	-1164 Jan 29 j 19:39	0° Z		direct	-1159 Mar 23 j 19:59	1° Ω 49'09		
	-1164 Mar 08 j 10:33	0° \approx			-1159 Jun 13 j 01:18	0° M		
	-1164 Apr 16 j 21:43	0° H		desc. node	-1159 Jul 07 j 06:51	14° M 24'11		
	-1164 May 28 j 08:18	0° Y			-1159 Jul 31 j 05:26	0° $\underline{\text{A}}$		
	-1164 Jul 12 j 13:06	0° B			-1159 Sep 11 j 11:54	0° M		
	-1164 Sep 05 j 14:13	0° II			-1159 Oct 21 j 00:29	0° Z		
asc. node	-1164 Sep 16 j 02:33	4° II 19'15			-1159 Nov 28 j 09:47	0° Z		
retrograde	-1164 Oct 24 j 20:14	12° II 33'21			-1158 Jan 05 j 20:42	0° \approx		
min. Earth dist.	-1164 Nov 30 j 23:53	3° II 47'49	0.64871 AU	evening set	-1158 Feb 13 j 01:56	29° \approx 03'50		
opposition	-1164 Dec 03 j 22:47	2° II 36'42	2°52'50		-1158 Feb 14 j 08:02	0° H		
greatest brilliancy	-1164 Dec 03 j 11:28	2° II 48'03	-1.4m		-1158 Mar 27 j 12:13	0° Y		
	-1164 Dec 10 j 14:09	30° R B		conjunction	-1158 Apr 13 j 21:29	12° Y 14'30	0°-15'-6	
direct	-1163 Jan 12 j 03:34	23° B 17'50		minimum elong	-1158 Apr 13 j 22:22	12° Y 16'02	0°15'05	
	-1163 Feb 17 j 08:46	0° II		behind sun begin	-1158 Apr 13 j 15:12	12° Y 03'34		
	-1163 Apr 23 j 16:59	0° S		behind sun end	-1158 Apr 14 j 05:31	12° Y 28'31		
	-1163 Jun 14 j 04:54	0° Ω		asc. node	-1158 May 09 j 00:23	29° Y 30'39		
	-1163 Jul 30 j 22:09	0° M			-1158 May 09 j 17:42	0° B		
	-1163 Sep 12 j 08:08	0° $\underline{\text{A}}$		max. Earth dist.	-1158 May 15 j 22:30	4° B 11'16	2.55970 AU	
desc. node	-1163 Oct 02 j 09:34	14° $\underline{\text{A}}$ 30'59		morning rise	-1158 Jun 07 j 06:23	19° B 03'09		
evening set	-1163 Oct 05 j 10:28	16° $\underline{\text{A}}$ 44'55			-1158 Jun 24 j 00:19	0° II		
	-1163 Oct 23 j 05:43	0° M			-1158 Aug 10 j 04:05	0° S		
max. Earth dist.	-1163 Oct 26 j 23:10	2° M 48'32	2.40620 AU					

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 25

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1158 Sep 28 j 09:14	0°♈			-1152 Jan 20 j 20:24	0°♑		
	-1158 Nov 20 j 14:25	0°♐			-1152 Mar 09 j 10:44	0°♏		
retrograde	-1157 Feb 16 j 14:00	29°♐48'48			-1152 Apr 26 j 16:27	0°♎		
opposition	-1157 Mar 24 j 09:39	22°♐17'23	2°55'34		-1152 Jun 13 j 14:10	0°♍		
greatest brilliancy	-1157 Mar 25 j 16:25	21°♐49'38	-1.9m	evening set	-1152 Jun 27 j 08:01	8°♍41'19		
min. Earth dist.	-1157 Apr 01 j 10:15	19°♐24'04	0.53432 AU	max. Earth dist.	-1152 Jul 28 j 15:03	28°♍41'43	2.64943 AU	
direct	-1157 May 02 j 20:41	13°♐07'26			-1152 Jul 30 j 15:33	0°♌		
desc. node	-1157 May 25 j 05:28	16°♐15'51						
	-1157 Jun 28 j 09:03	0°♋		conjunction	-1152 Aug 12 j 07:46	8°♌13'28	1°08'12	
	-1157 Aug 16 j 16:58	0°♌		minimum elong	-1152 Aug 12 j 08:18	8°♌14'20	1°08'13	
	-1157 Sep 27 j 13:32	0°♍			-1152 Sep 14 j 08:00	0°♎		
	-1157 Nov 06 j 05:09	0°♎		morning rise	-1152 Sep 26 j 16:28	8°♎17'45		
	-1157 Dec 15 j 15:18	0°♏			-1152 Oct 28 j 09:44	0°♏		
	-1156 Jan 24 j 23:44	0°♐			-1152 Dec 09 j 21:57	0°♐		
	-1156 Mar 06 j 23:11	0°♑		desc. node	-1151 Jan 14 j 04:20	25°♐36'53		
asc. node	-1156 Mar 25 j 22:53	13°♑08'35			-1151 Jan 20 j 03:26	0°♑		
evening set	-1156 Apr 07 j 19:00	21°♑53'24			-1151 Mar 01 j 14:02	0°♒		
	-1156 Apr 19 j 20:04	0°♒			-1151 Apr 11 j 03:14	0°♓		
					-1151 May 23 j 13:11	0°♈		
conjunction	-1156 May 29 j 08:05	26°♒03'13	0°35'38		-1151 Jul 12 j 08:10	0°♑		
minimum elong	-1156 May 29 j 06:48	26°♒01'08	0°35'38	retrograde	-1151 Sep 01 j 08:04	14°♑52'40		
	-1156 Jun 04 j 09:58	0°♒		min. Earth dist.	-1151 Oct 01 j 14:39	8°♑35'21	0.51296 AU	
max. Earth dist.	-1156 Jun 11 j 23:11	4°♒52'59	2.64340 AU	opposition	-1151 Oct 09 j 06:42	5°♑43'29	-1°-49'-5	
morning rise	-1156 Jul 16 j 01:33	26°♒43'39		greatest brilliancy	-1151 Oct 08 j 13:22	5°♑59'42	-2.0m	
	-1156 Jul 21 j 05:01	0°♓			-1151 Oct 27 j 12:11	30°♒♈		
	-1156 Sep 06 j 16:44	0°♌		direct	-1151 Nov 12 j 19:46	28°♈12'28		
	-1156 Oct 24 j 17:37	0°♍		asc. node	-1151 Nov 15 j 19:17	28°♈15'54		
	-1156 Dec 13 j 00:35	0°♋			-1151 Nov 30 j 00:57	0°♑		
	-1155 Feb 04 j 13:52	0°♌			-1150 Feb 11 j 02:01	0°♒		
desc. node	-1155 Apr 11 j 04:48	23°♌28'30			-1150 Apr 05 j 11:28	0°♒		
retrograde	-1155 Apr 20 j 03:21	23°♌57'30			-1150 May 25 j 11:02	0°♓		
opposition	-1155 May 21 j 14:19	18°♌27'29	-2°-35'-40		-1150 Jul 12 j 06:25	0°♌		
greatest brilliancy	-1155 May 22 j 09:58	18°♌13'07	-2.7m	evening set	-1150 Aug 04 j 13:55	15°♌08'34		
min. Earth dist.	-1155 May 27 j 23:08	16°♌36'26	0.40691 AU	max. Earth dist.	-1150 Aug 24 j 08:05	28°♌16'29	2.57332 AU	
direct	-1155 Jun 23 j 23:43	12°♌05'53			-1150 Aug 26 j 21:39	0°♍		
	-1155 Aug 19 j 16:30	0°♎						
	-1155 Oct 07 j 01:57	0°♏		conjunction	-1150 Sep 21 j 06:33	17°♏20'29	0°42'22	
	-1155 Nov 19 j 11:12	0°♐		minimum elong	-1150 Sep 21 j 07:58	17°♏22'57	0°42'20	
	-1154 Jan 01 j 09:48	0°♑			-1150 Oct 09 j 08:17	0°♋		
asc. node	-1154 Feb 10 j 21:46	27°♑44'11		morning rise	-1150 Nov 10 j 03:03	22°♋52'48		
	-1154 Feb 14 j 06:17	0°♑			-1150 Nov 19 j 19:25	0°♌		
	-1154 Mar 31 j 11:26	0°♒		desc. node	-1150 Dec 02 j 02:57	9°♌08'49		
	-1154 May 16 j 21:21	0°♒			-1150 Dec 29 j 17:52	0°♑		
evening set	-1154 May 21 j 00:01	2°♒37'51			-1149 Feb 06 j 18:30	0°♒		
	-1154 Jul 02 j 22:19	0°♓			-1149 Mar 17 j 16:29	0°♓		
max. Earth dist.	-1154 Jul 05 j 16:48	1°♓45'50	2.67356 AU		-1149 Apr 26 j 11:47	0°♈		
					-1149 Jun 07 j 13:47	0°♑		
conjunction	-1154 Jul 07 j 06:14	2°♓45'26	1°04'49		-1149 Jul 24 j 19:42	0°♒		
minimum elong	-1154 Jul 07 j 05:21	2°♓44'03	1°04'50	asc. node	-1149 Oct 03 j 19:00	27°♒59'26		
	-1154 Aug 18 j 21:20	0°♌		retrograde	-1149 Oct 11 j 21:39	28°♒25'24		
morning rise	-1154 Aug 21 j 05:33	1°♌30'19		min. Earth dist.	-1149 Nov 16 j 08:00	20°♒14'30	0.62098 AU	
	-1154 Oct 04 j 05:15	0°♍		opposition	-1149 Nov 20 j 18:04	18°♒28'40	1°54'59	
	-1154 Nov 18 j 17:44	0°♋		greatest brilliancy	-1149 Nov 20 j 06:40	18°♒40'03	-1.5m	
	-1153 Jan 02 j 14:05	0°♌		direct	-1149 Dec 28 j 21:36	9°♒31'39		
	-1153 Feb 16 j 05:12	0°♎			-1148 Mar 07 j 12:41	0°♒		
desc. node	-1153 Feb 27 j 05:34	7°♎21'16			-1148 May 03 j 02:01	0°♓		
	-1153 Apr 02 j 22:00	0°♏			-1148 Jun 21 j 23:01	0°♌		
	-1153 May 25 j 22:08	0°♐			-1148 Aug 07 j 04:36	0°♍		
retrograde	-1153 Jul 08 j 11:25	11°♐14'38		evening set	-1148 Sep 15 j 18:11	27°♍19'00		
min. Earth dist.	-1153 Aug 04 j 03:07	6°♐47'07	0.39364 AU		-1148 Sep 19 j 12:41	0°♋		
greatest brilliancy	-1153 Aug 08 j 09:11	5°♐33'03	-2.7m	max. Earth dist.	-1148 Sep 30 j 18:45	8°♋05'10	2.45525 AU	
opposition	-1153 Aug 09 j 21:31	5°♐06'27	-6°-33'-10	desc. node	-1148 Oct 19 j 02:06	21°♋29'16		
	-1153 Sep 03 j 13:20	30°♒♓			-1148 Oct 30 j 12:18	0°♌		
direct	-1153 Sep 09 j 00:32	29°♓48'11						
	-1153 Sep 14 j 12:08	0°♓		conjunction	-1148 Nov 08 j 15:28	6°♌52'38	0°-13'-37	
	-1153 Dec 01 j 01:40	0°♈		minimum elong	-1148 Nov 08 j 14:37	6°♌51'01	0°13'38	
asc. node	-1153 Dec 29 j 20:15	16°♈41'26		behind sun begin	-1148 Nov 08 j 01:05	6°♌25'26		

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 26

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

behind sun end	-1148 Nov 09 j 04:09	7° M 16'36			-1143 Dec 05 j 07:30	0° M	
	-1148 Dec 08 j 19:25	0° J		retrograde	-1142 Jan 28 j 16:28	13° M 38'17	
morning rise	-1147 Jan 08 j 21:40	24° J 16'34		opposition	-1142 Mar 06 j 18:59	5° M 31'40	3°53'55
	-1147 Jan 16 j 04:40	0° Z		greatest brilliancy	-1142 Mar 08 j 03:01	5° M 01'40	-1.6m
greatest brilliancy	-1147 Jan 21 j 09:08	4° Z 04'17	1.2m	min. Earth dist.	-1142 Mar 13 j 17:49	2° M 55'44	0.58048 AU
	-1147 Feb 23 j 12:46	0° \approx			-1142 Mar 22 j 05:25	30° R Ω	
	-1147 Apr 03 j 17:06	0° H		direct	-1142 Apr 16 j 07:58	25° Ω 52'08	
	-1147 May 14 j 15:24	0° Y			-1142 May 12 j 16:39	0° M	
	-1147 Jun 27 j 09:09	0° B		desc. node	-1142 Jun 10 j 22:39	11° M 40'45	
	-1147 Aug 14 j 22:51	0° II			-1142 Jul 13 j 19:43	0° $\underline{\text{A}}$	
asc. node	-1147 Aug 20 j 18:08	3° II 16'07			-1142 Aug 27 j 14:05	0° M	
	-1147 Oct 20 j 05:12	0° S			-1142 Oct 07 j 02:00	0° J	
retrograde	-1147 Nov 15 j 00:38	3° S 47'48			-1142 Nov 15 j 00:44	0° Z	
	-1147 Dec 08 j 23:30	30° R II			-1142 Dec 23 j 22:23	0° \approx	
min. Earth dist.	-1147 Dec 24 j 11:57	24° II 17'00	0.67223 AU		-1141 Feb 01 j 20:01	0° H	
opposition	-1147 Dec 25 j 02:47	24° II 02'09	3°58'06		-1141 Mar 15 j 09:50	0° Y	
greatest brilliancy	-1147 Dec 24 j 22:14	24° II 06'42	-1.2m	evening set	-1141 Mar 20 j 07:56	3° Y 27'37	
direct	-1146 Feb 03 j 12:44	14° II 18'49		asc. node	-1141 Apr 12 j 14:39	19° Y 34'57	
	-1146 Apr 03 j 18:30	0° S			-1141 Apr 27 j 22:57	0° B	
	-1146 May 31 j 02:19	0° Ω					
	-1146 Jul 18 j 07:28	0° M		conjunction	-1141 May 13 j 14:13	10° B 27'47	0°18'04
	-1146 Aug 31 j 04:15	0° $\underline{\text{A}}$		minimum elong	-1141 May 13 j 13:23	10° B 26'25	0°18'04
desc. node	-1146 Sep 06 j 00:53	4° $\underline{\text{A}}$ 11'01		max. Earth dist.	-1141 Jun 02 j 21:34	23° B 50'38	2.61688 AU
	-1146 Oct 11 j 03:07	0° M			-1141 Jun 12 j 08:15	0° II	
evening set	-1146 Nov 10 j 10:08	23° M 10'39		morning rise	-1141 Jul 02 j 08:15	12° II 54'23	
	-1146 Nov 19 j 04:33	0° J			-1141 Jul 29 j 04:21	0° S	
	-1146 Dec 27 j 07:40	0° Z			-1141 Sep 15 j 03:01	0° Ω	
					-1141 Nov 03 j 10:57	0° M	
conjunction	-1145 Jan 14 j 06:02	14° Z 08'41	-1°-4'-36		-1141 Dec 26 j 07:04	0° $\underline{\text{A}}$	
minimum elong	-1145 Jan 14 j 04:49	14° Z 06'17	1°04'38		-1140 Mar 17 j 19:11	0° M	
	-1145 Feb 03 j 11:23	0° \approx		retrograde	-1140 Mar 23 j 02:02	0° M 10'16	
max. Earth dist.	-1145 Feb 22 j 05:23	14° \approx 31'29	2.38363 AU		-1140 Mar 28 j 06:59	30° R $\underline{\text{A}}$	
	-1145 Mar 14 j 13:01	0° H		opposition	-1140 Apr 25 j 08:38	23° $\underline{\text{A}}$ 49'04	0°09'03
morning rise	-1145 Mar 24 j 08:26	7° H 21'26		greatest brilliancy	-1140 Jan 10 j 02:20	7° $\underline{\text{A}}$ 35'55	-3.4m
	-1145 Apr 24 j 06:47	0° Y		desc. node	-1140 Apr 27 j 22:21	22° $\underline{\text{A}}$ 58'35	
	-1145 Jun 06 j 07:23	0° B		min. Earth dist.	-1140 May 03 j 14:32	21° $\underline{\text{A}}$ 08'33	0.45399 AU
asc. node	-1145 Jul 08 j 16:56	21° B 24'08		direct	-1140 May 31 j 17:36	16° $\underline{\text{A}}$ 05'13	
	-1145 Jul 22 j 04:41	0° II			-1140 Jul 19 j 21:22	0° M	
	-1145 Sep 10 j 08:08	0° S			-1140 Sep 07 j 13:46	0° J	
	-1145 Nov 12 j 13:42	0° Ω			-1140 Oct 19 j 22:06	0° Z	
retrograde	-1145 Dec 20 j 05:34	7° Ω 17'09			-1140 Nov 29 j 21:59	0° \approx	
	-1144 Jan 23 j 15:13	30° R S			-1139 Jan 10 j 10:14	0° H	
opposition	-1144 Jan 28 j 10:42	28° S 08'04	4°42'24		-1139 Feb 22 j 07:23	0° Y	
greatest brilliancy	-1144 Jan 29 j 01:48	27° S 53'14	-1.3m	asc. node	-1139 Feb 27 j 12:46	3° Y 34'41	
min. Earth dist.	-1144 Jan 31 j 16:56	26° S 51'15	0.65867 AU		-1139 Apr 07 j 20:31	0° B	
direct	-1144 Mar 09 j 19:17	18° S 06'38		evening set	-1139 May 05 j 02:32	17° B 51'58	
	-1144 Apr 28 j 01:42	0° Ω			-1139 May 23 j 20:29	0° II	
	-1144 Jun 24 j 03:37	0° M					
desc. node	-1144 Jul 23 j 23:05	19° M 00'15		conjunction	-1139 Jun 22 j 15:23	19° II 05'57	0°56'26
	-1144 Aug 09 j 03:48	0° $\underline{\text{A}}$		minimum elong	-1139 Jun 22 j 14:09	19° II 03'59	0°56'27
	-1144 Sep 19 j 18:36	0° M		max. Earth dist.	-1139 Jun 26 j 16:51	21° II 41'31	2.66825 AU
	-1144 Oct 29 j 00:53	0° J			-1139 Jul 09 j 17:35	0° S	
	-1144 Dec 06 j 06:19	0° Z		morning rise	-1139 Aug 07 j 07:15	18° S 11'52	
	-1143 Jan 13 j 13:19	0° \approx			-1139 Aug 25 j 19:23	0° Ω	
evening set	-1143 Jan 18 j 04:55	3° \approx 36'11			-1139 Oct 11 j 15:03	0° M	
	-1143 Feb 21 j 20:08	0° H			-1139 Nov 27 j 03:58	0° $\underline{\text{A}}$	
					-1138 Jan 12 j 20:59	0° M	
conjunction	-1143 Mar 22 j 22:25	21° H 27'06	0°-37'-14		-1138 Mar 02 j 02:37	0° J	
minimum elong	-1143 Mar 23 j 00:41	21° H 31'11	0°37'13	desc. node	-1138 Mar 15 j 21:35	8° J 06'48	
	-1143 Apr 03 j 19:26	0° Y			-1138 Apr 27 j 14:41	0° Z	
max. Earth dist.	-1143 May 02 j 06:29	19° Y 59'44	2.51347 AU	retrograde	-1138 Jun 08 j 20:09	10° Z 01'05	
	-1143 May 16 j 21:05	0° B		min. Earth dist.	-1138 Jul 08 j 05:24	5° Z 12'49	0.37538 AU
morning rise	-1143 May 20 j 08:33	2° B 21'27		opposition	-1138 Jul 09 j 09:02	4° Z 54'25	-6°-31'-21
asc. node	-1143 May 25 j 16:37	5° B 57'25		greatest brilliancy	-1138 Jul 09 j 01:33	4° Z 59'24	-2.9m
	-1143 Jul 01 j 03:39	0° II			-1138 Aug 05 j 12:11	30° R J	
	-1143 Aug 17 j 16:48	0° S		direct	-1138 Aug 08 j 02:46	29° J 57'14	
	-1143 Oct 07 j 07:25	0° Ω			-1138 Aug 10 j 17:30	0° Z	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 27

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1138 Oct 27 j 15:29	0°♊		behind sun begin	-1133 Oct 19 j 01:25	15°♊27'02	
	-1138 Dec 15 j 06:14	0°♋		behind sun end	-1133 Oct 20 j 10:46	16°♊27'55	
asc. node	-1137 Jan 15 j 12:32	20°♋05'39		desc. node	-1133 Nov 05 j 18:26	28°♊30'34	
	-1137 Jan 30 j 21:17	0°♌			-1133 Nov 07 j 18:26	0°♌	
	-1137 Mar 18 j 16:28	0°♍		morning rise	-1133 Dec 14 j 14:10	27°♌55'47	
	-1137 May 05 j 00:18	0°♎			-1133 Dec 17 j 06:42	0°♏	
evening set	-1137 Jun 13 j 16:42	25°♎03'50			-1132 Jan 24 j 20:57	0°♐	
	-1137 Jun 21 j 11:44	0°♏			-1132 Mar 03 j 08:56	0°♑	
max. Earth dist.	-1137 Jul 20 j 05:10	18°♏17'11	2.66526 AU		-1132 Apr 11 j 16:40	0°♒	
					-1132 May 22 j 20:42	0°♓	
conjunction	-1137 Jul 29 j 20:37	24°♓28'13	1°10'08		-1132 Jul 06 j 07:22	0°♈	
minimum elong	-1137 Jul 29 j 20:34	24°♓28'09	1°10'10		-1132 Aug 26 j 18:40	0°♉	
	-1137 Aug 07 j 10:44	0°♊		asc. node	-1132 Sep 06 j 09:51	5°♉12'01	
morning rise	-1137 Sep 12 j 16:20	23°♊37'33		retrograde	-1132 Nov 01 j 15:16	20°♉43'24	
	-1137 Sep 22 j 07:34	0°♋		min. Earth dist.	-1132 Dec 09 j 15:50	11°♉40'28	0.65977 AU
	-1137 Nov 05 j 19:57	0°♌		opposition	-1132 Dec 11 j 18:39	10°♉49'27	3°20'23
	-1137 Dec 19 j 00:31	0°♍		greatest brilliancy	-1132 Dec 11 j 08:59	10°♉59'09	-1.3m
	-1136 Jan 30 j 03:30	0°♎		direct	-1131 Jan 20 j 10:50	1°♉20'36	
desc. node	-1136 Jan 31 j 20:44	1°♎14'09			-1131 Apr 16 j 18:47	0°♏	
	-1136 Mar 11 j 17:09	0°♐			-1131 Jun 08 j 19:38	0°♑	
	-1136 Apr 22 j 22:06	0°♑			-1131 Jul 26 j 00:14	0°♒	
	-1136 Jun 08 j 05:10	0°♒			-1131 Sep 07 j 14:08	0°♓	
retrograde	-1136 Aug 13 j 03:47	23°♒25'19		desc. node	-1131 Sep 22 j 17:38	10°♓54'44	
min. Earth dist.	-1136 Sep 10 j 08:54	17°♒59'47	0.46200 AU	evening set	-1131 Oct 17 j 16:17	29°♓22'33	
greatest brilliancy	-1136 Sep 17 j 01:14	15°♒39'56	-2.3m		-1131 Oct 18 j 12:12	0°♈	
opposition	-1136 Sep 18 j 11:57	15°♒09'32	-3°-47'-2	max. Earth dist.	-1131 Nov 19 j 14:09	24°♈31'56	2.38327 AU
direct	-1136 Oct 21 j 04:47	8°♒27'51			-1131 Nov 26 j 15:00	0°♉	
asc. node	-1136 Dec 02 j 12:02	17°♒56'53					
	-1136 Dec 29 j 07:43	0°♓		conjunction	-1131 Dec 17 j 05:58	16°♒09'18	0°-51'-16
	-1135 Feb 22 j 05:49	0°♈		minimum elong	-1131 Dec 17 j 03:08	16°♒03'44	0°51'17
	-1135 Apr 13 j 19:53	0°♉			-1130 Jan 03 j 19:43	0°♐	
	-1135 Jun 01 j 18:38	0°♏			-1130 Feb 11 j 00:12	0°♑	
	-1135 Jul 19 j 04:55	0°♑		morning rise	-1130 Feb 23 j 23:10	10°♑03'24	
evening set	-1135 Jul 20 j 10:30	0°♒47'40			-1130 Mar 22 j 01:43	0°♒	
max. Earth dist.	-1135 Aug 13 j 08:10	16°♒22'29	2.60901 AU		-1130 May 01 j 19:30	0°♓	
	-1135 Sep 02 j 19:31	0°♓			-1130 Jun 13 j 23:03	0°♈	
				asc. node	-1130 Jul 25 j 09:06	26°♈51'40	
conjunction	-1135 Sep 05 j 01:25	1°♓30'40	0°56'06		-1130 Jul 30 j 10:41	0°♉	
minimum elong	-1135 Sep 05 j 02:42	1°♓32'49	0°56'06		-1130 Sep 21 j 01:09	0°♊	
	-1135 Oct 16 j 10:58	0°♋		retrograde	-1130 Dec 06 j 05:54	24°♊22'43	
morning rise	-1135 Oct 22 j 12:16	4°♋16'09		opposition	-1129 Jan 14 j 22:20	14°♊56'45	4°34'22
	-1135 Nov 27 j 06:13	0°♌		greatest brilliancy	-1129 Jan 15 j 05:06	14°♊50'02	-1.2m
desc. node	-1135 Dec 18 j 19:46	15°♌55'30		min. Earth dist.	-1129 Jan 16 j 16:05	14°♊15'20	0.67195 AU
	-1134 Jan 06 j 14:21	0°♍		direct	-1129 Feb 25 j 02:07	4°♊58'51	
	-1134 Feb 15 j 00:52	0°♎			-1129 May 13 j 21:43	0°♏	
	-1134 Mar 26 j 08:44	0°♏			-1129 Jul 04 j 13:56	0°♐	
	-1134 May 05 j 17:15	0°♑		desc. node	-1129 Aug 10 j 16:53	24°♐36'43	
	-1134 Jun 18 j 00:26	0°♒			-1129 Aug 18 j 10:36	0°♑	
	-1134 Aug 09 j 08:11	0°♒			-1129 Sep 28 j 16:37	0°♒	
retrograde	-1134 Sep 27 j 04:12	13°♒07'27			-1129 Nov 06 j 19:34	0°♓	
asc. node	-1134 Oct 20 j 10:21	9°♒17'46			-1129 Dec 14 j 22:51	0°♈	
min. Earth dist.	-1134 Oct 30 j 17:24	5°♒36'02	0.58456 AU	evening set	-1129 Dec 22 j 12:26	5°♒58'22	
opposition	-1134 Nov 05 j 13:05	3°♒18'31	0°41'58		-1128 Jan 22 j 03:13	0°♉	
greatest brilliancy	-1134 Nov 05 j 07:14	3°♒24'17	-1.7m				
	-1134 Nov 14 j 07:38	30°♒♑		conjunction	-1128 Feb 27 j 01:24	27°♒34'33	0°-56'-3
direct	-1134 Dec 12 j 10:59	24°♒49'01		minimum elong	-1128 Feb 27 j 04:00	27°♒39'29	0°56'03
	-1133 Jan 12 j 10:32	0°♈			-1128 Mar 01 j 06:37	0°♊	
	-1133 Mar 20 j 15:32	0°♉			-1128 Apr 11 j 02:18	0°♋	
	-1133 May 12 j 12:48	0°♏		max. Earth dist.	-1128 Apr 15 j 03:32	2°♋53'54	2.46179 AU
	-1133 Jun 30 j 08:47	0°♑		morning rise	-1128 Apr 30 j 05:34	13°♋33'32	
	-1133 Aug 15 j 06:52	0°♒			-1128 May 24 j 01:34	0°♓	
evening set	-1133 Aug 29 j 23:02	9°♒58'06		asc. node	-1128 Jun 11 j 07:07	12°♓15'11	
max. Earth dist.	-1133 Sep 14 j 06:50	20°♒35'10	2.50504 AU		-1128 Jul 08 j 10:35	0°♈	
	-1133 Sep 27 j 15:05	0°♋			-1128 Aug 25 j 14:41	0°♉	
					-1128 Oct 17 j 12:49	0°♊	
conjunction	-1133 Oct 19 j 17:31	15°♋56'24	0°11'07	retrograde	-1127 Jan 11 j 22:04	29°♊00'02	
minimum elong	-1133 Oct 19 j 18:05	15°♋57'28	0°11'05	opposition	-1127 Feb 19 j 00:28	20°♊25'02	4°26'37

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 28

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

greatest brilliancy	-1127 Feb 20 j 03:38	19°♂58'59	-1.5m	asc. node	-1122 Feb 01 j 03:54	24°♂53'03	
min. Earth dist.	-1127 Feb 24 j 14:23	18°♂16'42	0.61859 AU		-1122 Feb 08 j 19:59	0°♀	
direct	-1127 Apr 01 j 03:35	10°♂29'57			-1122 Mar 26 j 11:43	0°♂	
	-1127 Jun 04 j 09:37	0°♍			-1122 May 12 j 04:00	0°♂	
desc. node	-1127 Jun 27 j 15:12	12°♍49'14		evening set	-1122 May 29 j 18:41	11°♂12'47	
	-1127 Jul 25 j 01:20	0°♎			-1122 Jun 28 j 08:00	0°♎	
	-1127 Sep 06 j 00:06	0°♏		max. Earth dist.	-1122 Jul 10 j 23:28	8°♎03'04	2.67280 AU
	-1127 Oct 15 j 19:34	0°♐					
	-1127 Nov 23 j 08:47	0°♑		conjunction	-1122 Jul 15 j 12:48	10°♎57'19	1°07'56
	-1127 Dec 31 j 22:25	0°♒		minimum elong	-1122 Jul 15 j 12:12	10°♎56'22	1°07'57
	-1126 Feb 09 j 12:08	0°♓			-1122 Aug 14 j 06:26	0°♏	
evening set	-1126 Feb 26 j 12:30	12°♓32'32		morning rise	-1122 Aug 29 j 07:46	9°♏43'08	
	-1126 Mar 22 j 18:22	0°♑			-1122 Sep 29 j 09:53	0°♍	
					-1122 Nov 13 j 12:36	0°♎	
conjunction	-1126 Apr 25 j 05:44	23°♀19'33	0°-2'-27		-1122 Dec 27 j 16:15	0°♏	
minimum elong	-1126 Apr 25 j 05:49	23°♀19'41	0°02'27		-1121 Feb 09 j 04:24	0°♐	
behind sun begin	-1126 Apr 24 j 07:13	22°♀41'01		desc. node	-1121 Feb 17 j 12:56	5°♐46'45	
behind sun end	-1126 Apr 26 j 04:26	23°♀58'20			-1121 Mar 24 j 19:13	0°♑	
asc. node	-1126 Apr 29 j 06:32	26°♀04'44			-1121 May 10 j 01:21	0°♒	
	-1126 May 05 j 01:07	0°♓		retrograde	-1121 Jul 22 j 19:55	27°♒54'03	
max. Earth dist.	-1126 May 22 j 21:24	11°♓58'38	2.58200 AU	min. Earth dist.	-1121 Aug 18 j 14:45	23°♒12'51	0.41432 AU
morning rise	-1126 Jun 16 j 18:07	28°♓20'20		greatest brilliancy	-1121 Aug 24 j 01:18	21°♒30'39	-2.6m
	-1126 Jun 19 j 07:23	0°♈		opposition	-1121 Aug 25 j 19:11	20°♒57'33	-5°-45'-6
	-1126 Aug 05 j 06:53	0°♉		direct	-1121 Sep 25 j 16:48	15°♒11'24	
	-1126 Sep 22 j 22:02	0°♊			-1121 Nov 18 j 16:29	0°♓	
	-1126 Nov 13 j 06:41	0°♋		asc. node	-1121 Dec 20 j 03:13	16°♓04'40	
	-1125 Jan 13 j 09:40	0°♌			-1120 Jan 13 j 15:18	0°♑	
retrograde	-1125 Feb 28 j 11:50	10°♌19'03			-1120 Mar 03 j 17:59	0°♒	
opposition	-1125 Apr 04 j 10:49	3°♌10'32	2°06'51		-1120 Apr 21 j 15:49	0°♈	
greatest brilliancy	-1125 Apr 05 j 11:57	2°♌48'30	-2.0m		-1120 Jun 08 j 21:19	0°♉	
min. Earth dist.	-1125 Apr 12 j 19:32	0°♌14'57	0.50618 AU	evening set	-1120 Jul 05 j 16:33	16°♉56'22	
	-1125 Apr 13 j 13:10	30°♋♍			-1120 Jul 26 j 01:33	0°♊	
direct	-1125 May 13 j 00:16	24°♍24'53		max. Earth dist.	-1120 Aug 03 j 05:15	5°♊16'38	2.63714 AU
desc. node	-1125 May 15 j 13:57	24°♍27'38					
	-1125 Jun 12 j 03:44	0°♎		conjunction	-1120 Aug 20 j 18:42	16°♊45'30	1°05'05
	-1125 Aug 08 j 17:02	0°♏		minimum elong	-1120 Aug 20 j 19:33	16°♊46'54	1°05'05
	-1125 Sep 21 j 00:59	0°♐			-1120 Sep 09 j 17:23	0°♍	
	-1125 Oct 31 j 08:21	0°♑		morning rise	-1120 Oct 05 j 16:53	17°♍36'11	
	-1125 Dec 10 j 04:17	0°♒			-1120 Oct 23 j 15:15	0°♎	
	-1124 Jan 19 j 20:09	0°♓			-1120 Dec 04 j 20:55	0°♏	
	-1124 Mar 02 j 01:28	0°♑		desc. node	-1119 Jan 04 j 11:59	22°♏24'22	
asc. node	-1124 Mar 16 j 05:38	9°♀47'25			-1119 Jan 14 j 17:45	0°♐	
	-1124 Apr 15 j 02:34	0°♓			-1119 Feb 23 j 18:13	0°♑	
evening set	-1124 Apr 18 j 02:10	1°♓59'20			-1119 Apr 04 j 17:52	0°♒	
	-1124 May 30 j 18:52	0°♈			-1119 May 16 j 02:55	0°♓	
					-1119 Jul 01 j 03:38	0°♑	
conjunction	-1124 Jun 07 j 10:01	4°♈55'53	0°44'18	retrograde	-1119 Sep 11 j 05:19	26°♀03'40	
minimum elong	-1124 Jun 07 j 08:39	4°♈53'41	0°44'18	min. Earth dist.	-1119 Oct 12 j 16:42	19°♀18'02	0.54029 AU
max. Earth dist.	-1124 Jun 17 j 13:27	11°♈27'30	2.65444 AU	opposition	-1119 Oct 19 j 18:37	16°♀35'23	0°-48'-38
	-1124 Jul 16 j 13:41	0°♉		greatest brilliancy	-1119 Oct 19 j 11:09	16°♀42'32	-1.9m
morning rise	-1124 Jul 24 j 06:31	4°♉53'57		asc. node	-1119 Nov 06 j 02:26	10°♀53'22	
	-1124 Sep 01 j 20:45	0°♊		direct	-1119 Nov 24 j 05:48	8°♀40'56	
	-1124 Oct 19 j 09:11	0°♋			-1118 Feb 02 j 10:15	0°♓	
	-1124 Dec 06 j 10:33	0°♌			-1118 Mar 30 j 13:56	0°♈	
	-1123 Jan 25 j 11:28	0°♍			-1118 May 20 j 09:51	0°♉	
	-1123 Mar 25 j 16:33	0°♎			-1118 Jul 07 j 13:15	0°♊	
desc. node	-1123 Apr 01 j 13:55	2°♎35'52		evening set	-1118 Aug 13 j 11:44	24°♊05'50	
retrograde	-1123 May 07 j 17:44	9°♎42'18			-1118 Aug 22 j 07:13	0°♋	
opposition	-1123 Jun 07 j 06:50	4°♎34'15	-4°-17'-44	max. Earth dist.	-1118 Aug 31 j 07:55	6°♋06'41	2.55082 AU
greatest brilliancy	-1123 Jun 08 j 02:16	4°♎20'51	-2.8m				
min. Earth dist.	-1123 Jun 11 j 12:50	3°♎24'00	0.38798 AU	conjunction	-1118 Oct 01 j 01:19	27°♋24'19	0°32'17
	-1123 Jun 26 j 07:15	30°♏♍		minimum elong	-1118 Oct 01 j 02:37	27°♋26'37	0°32'16
direct	-1123 Jul 09 j 02:01	28°♏55'37			-1118 Oct 04 j 17:24	0°♎	
	-1123 Jul 21 j 16:59	0°♐			-1118 Nov 15 j 01:57	0°♏	
	-1123 Sep 26 j 22:34	0°♑		morning rise	-1118 Nov 21 j 16:51	4°♏55'28	
	-1123 Nov 12 j 01:45	0°♒		desc. node	-1118 Nov 22 j 12:02	5°♏31'15	
	-1123 Dec 26 j 06:06	0°♓			-1118 Dec 24 j 20:32	0°♑	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 29

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1117 Feb 01 j 16:56	0°☾				-1112 Feb 22 j 22:32	30°☾☽	
	-1117 Mar 12 j 10:17	0°♊		direct		-1112 Mar 17 j 19:02	26°☽19'24	
	-1117 Apr 20 j 23:37	0°♈				-1112 Apr 12 j 08:01	0°♏	
	-1117 Jun 01 j 14:15	0°♊				-1112 Jun 17 j 09:00	0°♎	
	-1117 Jul 17 j 08:48	0°♉		desc. node		-1112 Jul 14 j 07:52	16°♎33'37	
	-1117 Sep 14 j 13:37	0°♊				-1112 Aug 03 j 13:44	0°♎	
asc. node	-1117 Sep 24 j 00:30	3°♊04'42				-1112 Sep 14 j 14:04	0°♎	
retrograde	-1117 Oct 20 j 00:15	7°♊05'57				-1112 Oct 24 j 00:14	0°♎	
	-1117 Nov 21 j 19:31	30°♊				-1112 Dec 01 j 07:47	0°☾	
min. Earth dist.	-1117 Nov 25 j 09:56	28°♊34'57	0.63758 AU			-1111 Jan 08 j 16:18	0°♊	
greatest brilliancy	-1117 Nov 28 j 12:17	27°♊20'25	-1.4m	evening set		-1111 Feb 02 j 02:35	18°♊45'13	
opposition	-1117 Nov 29 j 00:16	27°♊08'24	2°30'26			-1111 Feb 17 j 00:32	0°♈	
direct	-1116 Jan 06 j 17:58	17°♊58'34				-1111 Mar 30 j 01:19	0°♊	
	-1116 Feb 26 j 08:22	0°♊						
	-1116 Apr 27 j 00:59	0°☽		conjunction		-1111 Apr 04 j 17:14	4°♊01'45	0°-24'-38
	-1116 Jun 16 j 20:16	0°♏		minimum elong		-1111 Apr 04 j 18:44	4°♊04'25	0°24'38
	-1116 Aug 02 j 09:45	0°♎		max. Earth dist.		-1111 May 10 j 09:28	28°♊48'24	2.53985 AU
	-1116 Sep 14 j 20:22	0°♎				-1111 May 12 j 03:36	0°♉	
evening set	-1116 Sep 26 j 14:58	8°♎27'33		asc. node		-1111 May 15 j 22:35	2°♉34'10	
desc. node	-1116 Oct 09 j 10:44	17°♎49'19		morning rise		-1111 May 30 j 19:12	12°♉32'24	
max. Earth dist.	-1116 Oct 13 j 23:01	21°♎09'04	2.42770 AU			-1111 Jun 26 j 08:50	0°♊	
	-1116 Oct 25 j 19:57	0°♎				-1111 Aug 12 j 14:58	0°☽	
						-1111 Oct 01 j 07:18	0°♏	
conjunction	-1116 Nov 21 j 15:34	20°♎23'33	0°-28'-11			-1111 Nov 25 j 06:52	0°♎	
minimum elong	-1116 Nov 21 j 13:44	20°♎20'01	0°28'11	retrograde		-1110 Feb 08 j 03:35	23°♎04'55	
	-1116 Dec 04 j 01:46	0°♎		opposition		-1110 Mar 16 j 13:25	15°♎16'46	3°23'35
	-1115 Jan 11 j 09:22	0°☾		greatest brilliancy		-1110 Mar 17 j 21:34	14°♎47'12	-1.8m
morning rise	-1115 Jan 25 j 00:51	10°☾43'52		min. Earth dist.		-1110 Mar 24 j 03:09	12°♎29'55	0.55593 AU
	-1115 Feb 18 j 15:37	0°♊		direct		-1110 Apr 25 j 13:16	5°♎51'20	
	-1115 Mar 29 j 17:49	0°♈		desc. node		-1110 Jun 01 j 06:48	13°♎36'09	
	-1115 May 09 j 12:52	0°♊				-1110 Jul 05 j 04:18	0°♎	
	-1115 Jun 21 j 22:29	0°♉				-1110 Aug 21 j 02:32	0°♎	
	-1115 Aug 08 j 10:39	0°♊				-1110 Oct 01 j 07:15	0°♎	
asc. node	-1115 Aug 10 j 23:53	1°♊30'26				-1110 Nov 09 j 14:40	0°☾	
	-1115 Oct 05 j 07:15	0°☽				-1110 Dec 18 j 18:11	0°♊	
retrograde	-1115 Nov 22 j 17:33	11°☽38'17				-1109 Jan 27 j 20:22	0°♈	
opposition	-1114 Jan 01 j 17:17	1°☽58'41	4°14'48			-1109 Mar 10 j 14:07	0°♊	
greatest brilliancy	-1114 Jan 01 j 16:26	1°☽59'31	-1.2m	evening set		-1109 Mar 31 j 15:22	14°♊37'48	
min. Earth dist.	-1114 Jan 01 j 22:44	1°☽53'14	0.67494 AU	asc. node		-1109 Apr 02 j 21:07	16°♊10'02	
	-1114 Jan 06 j 16:51	30°♊				-1109 Apr 23 j 06:02	0°♉	
direct	-1114 Feb 11 j 10:49	22°♊08'54						
	-1114 Mar 23 j 00:15	0°☽		conjunction		-1109 May 23 j 07:32	19°♉57'33	0°28'37
	-1114 May 24 j 20:19	0°♏		minimum elong		-1109 May 23 j 06:23	19°♉55'40	0°28'37
	-1114 Jul 13 j 01:18	0°♎				-1109 Jun 07 j 16:49	0°♊	
	-1114 Aug 26 j 05:57	0°♎		max. Earth dist.		-1109 Jun 08 j 20:00	0°♊44'06	2.63253 AU
desc. node	-1114 Aug 27 j 08:55	0°♎47'43		morning rise		-1109 Jul 10 j 20:40	21°♊20'11	
	-1114 Oct 06 j 07:28	0°♎				-1109 Jul 24 j 11:24	0°☽	
	-1114 Nov 14 j 09:29	0°♎				-1109 Sep 10 j 03:00	0°♏	
evening set	-1114 Nov 25 j 00:50	8°♎19'41				-1109 Oct 28 j 15:35	0°♎	
	-1114 Dec 22 j 12:39	0°☾				-1109 Dec 18 j 03:58	0°♎	
	-1113 Jan 29 j 16:14	0°♊				-1108 Feb 14 j 06:42	0°♎	
				retrograde		-1108 Apr 07 j 07:15	13°♎30'05	
conjunction	-1113 Jan 30 j 08:56	0°♊32'33	-1°-5'-35	desc. node		-1108 Apr 18 j 05:40	12°♎45'43	
minimum elong	-1113 Jan 30 j 09:30	0°♊33'40	1°05'37	opposition		-1108 May 09 j 14:14	7°♎37'43	-1°-19'-42
	-1113 Mar 09 j 17:46	0°♈		greatest brilliancy		-1108 May 10 j 03:27	7°♎27'34	-2.5m
max. Earth dist.	-1113 Mar 21 j 04:44	8°♈35'02	2.40875 AU	min. Earth dist.		-1108 May 17 j 02:31	5°♎19'56	0.42655 AU
morning rise	-1113 Apr 07 j 23:10	21°♈40'38		direct		-1108 Jun 13 j 09:13	0°♎38'18	
	-1113 Apr 19 j 11:13	0°♊				-1108 Aug 28 j 16:47	0°♎	
	-1113 Jun 01 j 09:42	0°♉				-1108 Oct 12 j 12:44	0°☾	
asc. node	-1113 Jun 29 j 00:01	18°♉23'09				-1108 Nov 23 j 15:23	0°♊	
	-1113 Jul 17 j 00:09	0°♊				-1107 Jan 04 j 19:43	0°♈	
	-1113 Sep 04 j 04:12	0°☽		asc. node		-1107 Feb 17 j 20:19	0°♊27'57	
	-1113 Oct 31 j 13:55	0°♏				-1107 Feb 17 j 03:53	0°♊	
retrograde	-1113 Dec 28 j 13:46	15°♏18'53				-1107 Apr 03 j 00:16	0°♉	
opposition	-1112 Feb 05 j 10:37	6°♏20'42	4°40'48	evening set		-1107 May 14 j 06:57	26°♉50'28	
greatest brilliancy	-1112 Feb 06 j 06:19	6°♏01'28	-1.3m			-1107 May 19 j 04:49	0°♊	
min. Earth dist.	-1112 Feb 09 j 13:02	4°♏44'42	0.64719 AU					

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 30

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

conjunction	-1107 Jul 01 j 01:20	27° <u>II</u> 23'33	1°01'45			-1102 Jul 29 j 21:04	0° <u>8</u>	
minimum elong	-1107 Jul 01 j 00:17	27° <u>II</u> 21'53	1°01'45	retrograde		-1102 Oct 05 j 18:15	22° <u>8</u> 28'53	
max. Earth dist.	-1107 Jul 02 j 00:10	27° <u>II</u> 59'55	2.67222 AU	asc. node		-1102 Oct 10 j 17:01	22° <u>8</u> 18'37	
	-1107 Jul 05 j 03:35	0° <u>8</u>		min. Earth dist.		-1102 Nov 09 j 08:36	14° <u>8</u> 34'46	0.60564 AU
morning rise	-1107 Aug 15 j 06:32	26° <u>8</u> 14'00		opposition		-1102 Nov 14 j 09:38	12° <u>8</u> 34'27	1°26'22
	-1107 Aug 21 j 03:43	0° <u>9</u>		greatest brilliancy		-1102 Nov 13 j 23:38	12° <u>8</u> 44'25	-1.6m
	-1107 Oct 06 j 16:54	0° <u>7</u>		direct		-1102 Dec 21 j 23:53	3° <u>8</u> 49'01	
	-1107 Nov 21 j 15:30	0° <u>6</u>				-1101 Mar 13 j 04:39	0° <u>II</u>	
	-1106 Jan 06 j 05:16	0° <u>7</u>				-1101 May 07 j 00:11	0° <u>8</u>	
	-1106 Feb 21 j 02:22	0° <u>7</u>				-1101 Jun 25 j 10:53	0° <u>9</u>	
desc. node	-1106 Mar 06 j 06:28	8° <u>7</u> 26'20				-1101 Aug 10 j 14:31	0° <u>7</u>	
	-1106 Apr 10 j 12:06	0° <u>8</u>		evening set		-1101 Sep 08 j 20:55	20° <u>7</u> 02'27	
retrograde	-1106 Jun 26 j 04:41	28° <u>8</u> 13'39				-1101 Sep 22 j 23:52	0° <u>6</u>	
min. Earth dist.	-1106 Jul 23 j 12:51	23° <u>8</u> 45'34	0.38184 AU	max. Earth dist.		-1101 Sep 23 j 15:20	0° <u>6</u> 27'30	2.47790 AU
greatest brilliancy	-1106 Jul 26 j 10:43	22° <u>8</u> 57'29	-2.8m	desc. node		-1101 Oct 27 j 03:12	24° <u>6</u> 49'11	
opposition	-1106 Jul 27 j 12:28	22° <u>8</u> 39'41	-6°-49'-33					
direct	-1106 Aug 26 j 04:48	17° <u>8</u> 37'36		conjunction		-1101 Oct 31 j 05:42	27° <u>6</u> 52'14	0°-2'-44
	-1106 Oct 12 j 21:07	0° <u>8</u>		minimum elong		-1101 Oct 31 j 05:30	27° <u>6</u> 51'51	0°02'46
	-1106 Dec 07 j 02:35	0° <u>7</u>		behind sun begin		-1101 Oct 30 j 06:25	27° <u>6</u> 08'55	
asc. node	-1105 Jan 05 j 18:44	18° <u>7</u> 11'31		behind sun end		-1101 Nov 01 j 04:34	28° <u>6</u> 34'50	
	-1105 Jan 24 j 15:58	0° <u>7</u>				-1101 Nov 03 j 02:11	0° <u>7</u>	
	-1105 Mar 13 j 08:30	0° <u>8</u>				-1101 Dec 12 j 12:03	0° <u>7</u>	
	-1105 Apr 30 j 03:35	0° <u>II</u>		morning rise		-1101 Dec 28 j 23:18	12° <u>7</u> 47'07	
	-1105 Jun 16 j 20:31	0° <u>8</u>				-1100 Jan 19 j 23:40	0° <u>8</u>	
evening set	-1105 Jun 22 j 02:19	3° <u>8</u> 18'53				-1100 Feb 27 j 09:07	0° <u>8</u>	
max. Earth dist.	-1105 Jul 25 j 15:37	24° <u>8</u> 42'02	2.65762 AU			-1100 Apr 06 j 13:52	0° <u>7</u>	
	-1105 Aug 02 j 21:07	0° <u>9</u>				-1100 May 17 j 13:00	0° <u>7</u>	
						-1100 Jun 30 j 10:46	0° <u>8</u>	
conjunction	-1105 Aug 07 j 02:25	2° <u>9</u> 43'39	1°09'31			-1100 Aug 18 j 20:24	0° <u>II</u>	
minimum elong	-1105 Aug 07 j 02:42	2° <u>9</u> 44'07	1°09'32	asc. node		-1100 Aug 27 j 16:35	4° <u>II</u> 46'19	
	-1105 Sep 17 j 16:14	0° <u>7</u>		retrograde		-1100 Nov 09 j 09:06	28° <u>II</u> 44'03	
morning rise	-1105 Sep 21 j 03:30	2° <u>7</u> 18'49		min. Earth dist.		-1100 Dec 18 j 04:54	19° <u>II</u> 25'13	0.66786 AU
	-1105 Oct 31 j 23:16	0° <u>6</u>		opposition		-1100 Dec 19 j 11:44	18° <u>II</u> 54'16	3°43'49
	-1105 Dec 13 j 19:10	0° <u>7</u>		greatest brilliancy		-1100 Dec 19 j 04:37	19° <u>II</u> 01'24	-1.3m
desc. node	-1104 Jan 22 j 05:34	28° <u>7</u> 24'46		direct		-1099 Jan 28 j 13:44	9° <u>II</u> 16'56	
	-1104 Jan 24 j 09:50	0° <u>7</u>				-1099 Apr 08 j 20:41	0° <u>8</u>	
	-1104 Mar 05 j 07:11	0° <u>8</u>				-1099 Jun 03 j 03:58	0° <u>9</u>	
	-1104 Apr 15 j 09:56	0° <u>8</u>				-1099 Jul 20 j 23:46	0° <u>7</u>	
	-1104 May 28 j 22:48	0° <u>7</u>				-1099 Sep 02 j 18:57	0° <u>6</u>	
	-1104 Jul 23 j 17:43	0° <u>7</u>		desc. node		-1099 Sep 13 j 01:53	7° <u>6</u> 21'56	
retrograde	-1104 Aug 24 j 10:16	6° <u>7</u> 27'06				-1099 Oct 13 j 18:43	0° <u>7</u>	
min. Earth dist.	-1104 Sep 22 j 16:58	0° <u>7</u> 33'13	0.49015 AU	evening set		-1099 Oct 30 j 17:08	12° <u>7</u> 51'17	
	-1104 Sep 24 j 06:07	30° <u>7</u>				-1099 Nov 21 j 21:22	0° <u>7</u>	
opposition	-1104 Sep 30 j 16:53	27° <u>7</u> 38'44	-2°-37'-59			-1099 Dec 30 j 01:20	0° <u>8</u>	
greatest brilliancy	-1104 Sep 29 j 15:46	28° <u>7</u> 01'39	-2.2m					
direct	-1104 Nov 03 j 11:10	20° <u>7</u> 28'39		conjunction		-1098 Jan 01 j 18:48	2° <u>8</u> 09'10	-1°00'-28
asc. node	-1104 Nov 22 j 17:23	22° <u>7</u> 42'55		minimum elong		-1098 Jan 01 j 16:32	2° <u>8</u> 04'42	1°00'29
	-1104 Dec 16 j 03:13	0° <u>7</u>		max. Earth dist.		-1098 Jan 09 j 02:11	7° <u>8</u> 55'08	2.37304 AU
	-1103 Feb 15 j 08:12	0° <u>8</u>				-1098 Feb 06 j 04:58	0° <u>8</u>	
	-1103 Apr 08 j 09:02	0° <u>II</u>		morning rise		-1098 Mar 12 j 06:52	26° <u>8</u> 15'27	
	-1103 May 27 j 21:32	0° <u>8</u>				-1098 Mar 17 j 05:30	0° <u>7</u>	
	-1103 Jul 14 j 13:29	0° <u>9</u>				-1098 Apr 26 j 21:54	0° <u>7</u>	
evening set	-1103 Jul 29 j 00:49	9° <u>8</u> 21'33				-1098 Jun 08 j 21:52	0° <u>8</u>	
max. Earth dist.	-1103 Aug 19 j 14:56	23° <u>8</u> 34'23	2.59023 AU	asc. node		-1098 Jul 15 j 15:14	24° <u>8</u> 07'31	
	-1103 Aug 29 j 05:30	0° <u>7</u>				-1098 Jul 24 j 22:33	0° <u>II</u>	
						-1098 Sep 13 j 19:32	0° <u>8</u>	
conjunction	-1103 Sep 14 j 03:58	10° <u>7</u> 48'34	0°48'45			-1098 Nov 24 j 12:03	0° <u>9</u>	
minimum elong	-1103 Sep 14 j 05:22	10° <u>7</u> 50'58	0°48'44	retrograde		-1098 Dec 14 j 05:18	2° <u>9</u> 13'01	
	-1103 Oct 11 j 19:11	0° <u>6</u>				-1097 Jan 01 j 17:54	30° <u>7</u>	
morning rise	-1103 Nov 01 j 19:26	14° <u>6</u> 58'32		opposition		-1097 Jan 22 j 15:44	22° <u>6</u> 56'04	4°40'21
	-1103 Nov 22 j 10:47	0° <u>7</u>		greatest brilliancy		-1097 Jan 23 j 03:08	22° <u>6</u> 44'48	-1.3m
desc. node	-1103 Dec 09 j 04:04	12° <u>7</u> 23'04		min. Earth dist.		-1097 Jan 25 j 05:47	21° <u>6</u> 54'47	0.66580 AU
	-1102 Jan 01 j 13:56	0° <u>7</u>		direct		-1097 Mar 04 j 22:26	12° <u>6</u> 55'32	
	-1102 Feb 09 j 19:02	0° <u>8</u>				-1097 May 05 j 05:09	0° <u>9</u>	
	-1102 Mar 20 j 20:48	0° <u>8</u>				-1097 Jun 28 j 14:59	0° <u>7</u>	
	-1102 Apr 29 j 20:06	0° <u>7</u>		desc. node		-1097 Jul 31 j 23:59	21° <u>7</u> 39'00	
	-1102 Jun 11 j 06:40	0° <u>7</u>				-1097 Aug 13 j 03:58	0° <u>6</u>	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 31

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1097 Sep 23 j 16:07	0°♌		minimum elong	-1092 Jun 16 j 04:22	13°♊32'45	0°51'48
	-1097 Nov 01 j 21:33	0°♏		max. Earth dist.	-1092 Jun 23 j 00:41	17°♊55'42	2.66323 AU
greatest brilliancy	-1097 Nov 14 j 15:59	9°♏58'52	1.2m		-1092 Jul 11 j 22:33	0°♑	
	-1097 Dec 10 j 02:13	0°♑		morning rise	-1092 Aug 01 j 08:29	12°♑59'30	
evening set	-1096 Jan 07 j 05:50	22°♑08'17			-1092 Aug 28 j 02:27	0°♒	
	-1096 Jan 17 j 07:41	0°♒			-1092 Oct 14 j 05:03	0°♓	
	-1096 Feb 25 j 11:57	0°♈			-1092 Nov 30 j 08:12	0°♐	
					-1091 Jan 17 j 05:55	0°♌	
conjunction	-1096 Mar 12 j 11:29	11°♈54'18	0°-46'-1		-1091 Mar 09 j 09:37	0°♏	
minimum elong	-1096 Mar 12 j 14:07	11°♈59'10	0°46'01	desc. node	-1091 Mar 22 j 22:13	7°♏06'51	
	-1096 Apr 06 j 08:20	0°♐		retrograde	-1091 May 25 j 18:09	26°♏47'08	
max. Earth dist.	-1096 Apr 25 j 10:29	13°♐31'32	2.49077 AU	opposition	-1091 Jun 25 j 01:54	21°♏47'28	-5°-46'-2
morning rise	-1096 May 11 j 23:12	24°♐59'02		greatest brilliancy	-1091 Jun 25 j 09:27	21°♏42'26	-2.9m
	-1096 May 19 j 07:19	0°♑		min. Earth dist.	-1091 Jun 26 j 10:40	21°♏25'37	0.37719 AU
asc. node	-1096 Jun 01 j 14:35	8°♑58'53		direct	-1091 Jul 25 j 11:59	16°♏39'20	
	-1096 Jul 03 j 13:17	0°♒			-1091 Sep 12 j 02:39	0°♑	
	-1096 Aug 20 j 06:33	0°♑			-1091 Nov 03 j 11:33	0°♒	
	-1096 Oct 10 j 15:11	0°♒			-1091 Dec 19 j 15:09	0°♈	
	-1096 Dec 13 j 05:48	0°♓		asc. node	-1090 Jan 22 j 10:22	22°♈17'19	
retrograde	-1095 Jan 21 j 06:56	7°♓40'09			-1090 Feb 03 j 04:19	0°♐	
	-1095 Feb 26 j 02:05	30°♓♌			-1090 Mar 21 j 09:21	0°♑	
opposition	-1095 Feb 27 j 20:26	29°♒20'08	4°09'58		-1090 May 07 j 09:22	0°♒	
greatest brilliancy	-1095 Mar 01 j 02:43	28°♒51'24	-1.6m	evening set	-1090 Jun 07 j 09:36	19°♒39'12	
min. Earth dist.	-1095 Mar 06 j 04:47	26°♒55'47	0.59856 AU		-1090 Jun 23 j 17:10	0°♑	
direct	-1095 Apr 09 j 16:29	19°♒32'01		max. Earth dist.	-1090 Jul 16 j 07:55	14°♑23'31	2.66972 AU
	-1095 May 23 j 23:49	0°♓					
desc. node	-1095 Jun 17 j 23:28	12°♓04'31		conjunction	-1090 Jul 23 j 18:23	19°♑08'37	1°09'42
	-1095 Jul 18 j 06:57	0°♐		minimum elong	-1090 Jul 23 j 18:06	19°♑08'10	1°09'43
	-1095 Aug 31 j 05:05	0°♌			-1090 Aug 09 j 16:11	0°♒	
	-1095 Oct 10 j 09:33	0°♏		morning rise	-1090 Sep 06 j 11:54	18°♒03'02	
	-1095 Nov 18 j 03:44	0°♑			-1090 Sep 24 j 16:25	0°♓	
	-1095 Dec 26 j 21:10	0°♒			-1090 Nov 08 j 11:22	0°♐	
	-1094 Feb 04 j 14:08	0°♈			-1090 Dec 22 j 02:00	0°♌	
evening set	-1094 Mar 11 j 05:04	25°♈11'36			-1089 Feb 02 j 18:13	0°♏	
	-1094 Mar 17 j 23:22	0°♐		desc. node	-1089 Feb 07 j 21:26	3°♏38'16	
asc. node	-1094 Apr 19 j 13:06	22°♐39'27			-1089 Mar 17 j 01:53	0°♑	
	-1094 Apr 30 j 08:17	0°♑			-1089 Apr 29 j 12:21	0°♒	
					-1089 Jun 18 j 20:57	0°♈	
conjunction	-1094 May 05 j 22:02	3°♑45'29	0°09'43	retrograde	-1089 Aug 04 j 22:26	13°♈16'46	
minimum elong	-1094 May 05 j 21:33	3°♑44'41	0°09'44	min. Earth dist.	-1089 Sep 01 j 08:11	8°♈13'35	0.43963 AU
behind sun begin	-1094 May 05 j 03:55	3°♑15'03		greatest brilliancy	-1089 Sep 07 j 15:26	6°♈07'23	-2.4m
behind sun end	-1094 May 06 j 15:11	4°♑14'18		opposition	-1089 Sep 09 j 07:23	5°♈33'52	-4°-40'-8
max. Earth dist.	-1094 May 29 j 07:55	19°♑20'06	2.60233 AU		-1089 Sep 30 j 20:57	30°♓♒	
	-1094 Jun 14 j 15:05	0°♒		direct	-1089 Oct 11 j 03:53	29°♒16'53	
morning rise	-1094 Jun 25 j 19:07	7°♒14'04			-1089 Oct 21 j 19:25	0°♈	
	-1094 Jul 31 j 11:29	0°♑		asc. node	-1089 Dec 10 j 09:58	16°♈44'40	
	-1094 Sep 17 j 16:00	0°♒			-1088 Jan 05 j 07:44	0°♐	
	-1094 Nov 06 j 17:21	0°♓			-1088 Feb 26 j 17:23	0°♑	
	-1094 Dec 31 j 23:46	0°♐			-1088 Apr 16 j 12:01	0°♒	
retrograde	-1093 Mar 13 j 07:44	21°♐36'14			-1088 Jun 04 j 02:54	0°♑	
opposition	-1093 Apr 16 j 09:22	14°♐52'41	1°05'10	evening set	-1088 Jul 14 j 02:46	25°♑16'47	
greatest brilliancy	-1093 Apr 16 j 23:40	14°♐40'35	-2.2m		-1088 Jul 21 j 11:04	0°♒	
min. Earth dist.	-1093 Apr 24 j 20:20	12°♐01'43	0.47734 AU	max. Earth dist.	-1088 Aug 09 j 02:13	12°♒05'39	2.62266 AU
desc. node	-1093 May 05 j 23:16	8°♐49'59					
direct	-1093 May 23 j 19:56	6°♐38'06		conjunction	-1088 Aug 29 j 10:20	25°♒31'16	1°00'25
	-1093 Jul 29 j 20:21	0°♌		minimum elong	-1088 Aug 29 j 11:26	25°♒33'07	1°00'26
	-1093 Sep 13 j 20:01	0°♏			-1088 Sep 05 j 03:11	0°♓	
	-1093 Oct 25 j 02:15	0°♑		morning rise	-1088 Oct 15 j 02:13	27°♓19'04	
	-1093 Dec 04 j 11:28	0°♒			-1088 Oct 18 j 22:22	0°♐	
	-1092 Jan 14 j 12:37	0°♈			-1088 Nov 29 j 23:01	0°♌	
	-1092 Feb 26 j 01:04	0°♐		desc. node	-1088 Dec 25 j 20:44	19°♌02'48	
asc. node	-1092 Mar 06 j 11:01	6°♐28'51			-1087 Jan 09 j 13:04	0°♏	
	-1092 Apr 10 j 07:26	0°♑			-1087 Feb 18 j 05:28	0°♑	
evening set	-1092 Apr 27 j 23:32	11°♑40'26			-1087 Mar 29 j 19:15	0°♒	
	-1092 May 26 j 03:05	0°♒			-1087 May 09 j 11:24	0°♈	
					-1087 Jun 22 j 13:37	0°♐	
conjunction	-1092 Jun 16 j 05:41	13°♒34'52	0°51'48		-1087 Aug 18 j 22:43	0°♑	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 32

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

retrograde	-1087 Sep 20 j 13:23	6°♄29'08			-1082 Aug 21 j 06:03	0°♊	
	-1087 Oct 21 j 07:29	30°♋♎			-1082 Oct 01 j 11:11	0°♌	
min. Earth dist.	-1087 Oct 23 j 04:41	29°♎17'03	0.56562 AU		-1082 Nov 09 j 14:12	0°♍	
asc. node	-1087 Oct 27 j 08:21	27°♎40'05		evening set	-1082 Dec 10 j 08:27	24°♍10'40	
opposition	-1087 Oct 29 j 14:09	26°♎47'23	0°06'03		-1082 Dec 17 j 17:21	0°♎	
greatest brilliancy	-1086 May 08 j 17:12	26°♏07'21	-3.8m		-1081 Jan 24 j 20:53	0°♏	
direct	-1087 Dec 04 j 20:35	18°♎32'27					
	-1086 Jan 22 j 07:37	0°♏		conjunction	-1081 Feb 15 j 06:40	16°♏34'06	-1°-1'-40
	-1086 Mar 24 j 06:22	0°♐		minimum elong	-1081 Feb 15 j 08:43	16°♏38'04	1°01'42
	-1086 May 15 j 05:00	0°♑			-1081 Mar 04 j 22:25	0°♒	
	-1086 Jul 02 j 18:23	0°♒		max. Earth dist.	-1081 Apr 06 j 11:44	24°♒06'00	2.43778 AU
	-1086 Aug 17 j 15:51	0°♓			-1081 Apr 14 j 15:44	0°♓	
evening set	-1086 Aug 22 j 18:09	3°♓26'14		morning rise	-1081 Apr 21 j 14:11	4°♓57'42	
max. Earth dist.	-1086 Sep 08 j 02:43	14°♓37'08	2.52621 AU		-1081 May 27 j 13:09	0°♈	
	-1086 Sep 30 j 02:02	0°♈		asc. node	-1081 Jun 19 j 05:23	15°♈12'26	
					-1081 Jul 11 j 22:32	0°♉	
conjunction	-1086 Oct 11 j 10:25	8°♈06'23	0°20'38		-1081 Aug 29 j 09:43	0°♊	
minimum elong	-1086 Oct 11 j 11:23	8°♈08'08	0°20'37		-1081 Oct 22 j 16:22	0°♋	
	-1086 Nov 10 j 08:46	0°♌		retrograde	-1080 Jan 06 j 05:27	23°♋30'43	
desc. node	-1086 Nov 12 j 19:26	1°♌49'06		opposition	-1080 Feb 13 j 16:20	14°♋44'48	4°34'10
morning rise	-1086 Dec 04 j 05:49	17°♌56'51		greatest brilliancy	-1080 Feb 14 j 16:20	14°♋21'34	-1.4m
	-1086 Dec 20 j 00:29	0°♌		min. Earth dist.	-1080 Feb 18 j 14:17	12°♋50'40	0.63268 AU
	-1085 Jan 27 j 17:38	0°♍		direct	-1080 Mar 25 j 22:18	4°♋45'53	
	-1085 Mar 07 j 07:43	0°♎			-1080 Jun 09 j 16:21	0°♎	
	-1085 Apr 15 j 16:47	0°♏		desc. node	-1080 Jul 04 j 16:27	14°♎33'19	
	-1085 May 26 j 23:12	0°♐			-1080 Jul 28 j 16:16	0°♏	
	-1085 Jul 10 j 18:39	0°♑			-1080 Sep 09 j 05:45	0°♐	
	-1085 Sep 02 j 04:53	0°♒			-1080 Oct 18 j 21:29	0°♑	
asc. node	-1085 Sep 14 j 07:34	5°♒20'02			-1080 Nov 26 j 07:59	0°♒	
retrograde	-1085 Oct 27 j 21:58	15°♒26'37			-1079 Jan 03 j 18:42	0°♓	
min. Earth dist.	-1085 Dec 04 j 05:09	6°♒37'24	0.65100 AU		-1079 Feb 12 j 04:47	0°♈	
opposition	-1085 Dec 06 j 23:51	5°♒30'22	3°01'13	evening set	-1079 Feb 16 j 05:34	3°♈00'21	
greatest brilliancy	-1085 Dec 06 j 12:39	5°♒41'38	-1.4m		-1079 Mar 25 j 07:06	0°♉	
	-1085 Dec 21 j 22:38	30°♋♎					
direct	-1084 Jan 15 j 06:01	26°♋09'30		conjunction	-1079 Apr 16 j 16:19	15°♋44'59	0°-11'-45
	-1084 Feb 10 j 22:38	0°♏		minimum elong	-1079 Apr 16 j 17:00	15°♋46'10	0°11'45
	-1084 Apr 20 j 12:57	0°♑		behind sun begin	-1079 Apr 16 j 01:00	15°♋18'22	
	-1084 Jun 11 j 14:13	0°♒		behind sun end	-1079 Apr 17 j 09:00	16°♋13'57	
	-1084 Jul 28 j 13:31	0°♓		asc. node	-1079 May 06 j 04:24	29°♋09'00	
	-1084 Sep 10 j 03:09	0°♈			-1079 May 07 j 10:25	0°♈	
desc. node	-1084 Sep 29 j 18:20	14°♈09'57		max. Earth dist.	-1079 May 17 j 19:59	7°♈01'24	2.56399 AU
evening set	-1084 Oct 08 j 06:07	20°♈24'41		morning rise	-1079 Jun 09 j 16:31	22°♈12'14	
	-1084 Oct 21 j 02:58	0°♉			-1079 Jun 21 j 14:47	0°♉	
max. Earth dist.	-1084 Oct 31 j 01:47	7°♉30'44	2.40120 AU		-1079 Aug 07 j 15:45	0°♊	
	-1084 Nov 29 j 07:40	0°♋			-1079 Sep 25 j 15:37	0°♋	
					-1079 Nov 17 j 04:57	0°♌	
conjunction	-1084 Dec 05 j 17:46	5°♋00'14	0°-42'-3		-1078 Jan 26 j 17:08	0°♌	
minimum elong	-1084 Dec 05 j 15:09	4°♋55'06	0°42'03	retrograde	-1078 Feb 19 j 08:10	3°♌03'35	
	-1083 Jan 06 j 13:46	0°♍			-1078 Mar 13 j 08:52	30°♋♎	
morning rise	-1083 Feb 10 j 21:27	27°♍44'50		opposition	-1078 Mar 26 j 23:17	25°♎36'13	2°43'36
	-1083 Feb 13 j 18:45	0°♎		greatest brilliancy	-1078 Mar 28 j 04:43	25°♎09'45	-1.9m
	-1083 Mar 24 j 19:43	0°♏		min. Earth dist.	-1078 Apr 04 j 00:56	22°♎42'32	0.52912 AU
	-1083 May 04 j 12:37	0°♐		direct	-1078 May 05 j 05:29	16°♎30'15	
	-1083 Jun 16 j 16:47	0°♑		desc. node	-1078 May 22 j 15:01	18°♎26'46	
asc. node	-1083 Aug 01 j 07:22	29°♑17'53			-1078 Jun 23 j 19:59	0°♏	
	-1083 Aug 02 j 11:01	0°♒			-1078 Aug 13 j 21:00	0°♐	
	-1083 Sep 25 j 12:49	0°♓			-1078 Sep 25 j 03:12	0°♑	
retrograde	-1083 Nov 30 j 11:29	19°♓23'53			-1078 Nov 03 j 22:30	0°♒	
opposition	-1082 Jan 09 j 07:08	9°♓51'27	4°27'28		-1078 Dec 13 j 09:56	0°♓	
greatest brilliancy	-1082 Jan 09 j 10:25	9°♓48'11	-1.2m		-1077 Jan 22 j 18:18	0°♈	
min. Earth dist.	-1082 Jan 10 j 08:40	9°♓26'01	0.67458 AU		-1077 Mar 05 j 16:52	0°♉	
	-1082 Feb 16 j 07:00	30°♋♏		asc. node	-1077 Mar 24 j 04:02	12°♋47'58	
direct	-1082 Feb 19 j 06:25	29°♏15'39		evening set	-1077 Apr 11 j 08:40	25°♋11'00	
	-1082 Feb 22 j 06:41	0°♑			-1077 Apr 18 j 12:29	0°♋	
	-1082 May 18 j 01:18	0°♒					
	-1082 Jul 07 j 15:15	0°♓		conjunction	-1077 Jun 01 j 15:53	29°♈06'04	0°38'07
desc. node	-1082 Aug 17 j 17:43	27°♓32'12		minimum elong	-1077 Jun 01 j 14:34	29°♈03'56	0°38'08

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 33

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1077 Jun 03 j 01:07	0°II		greatest brilliancy	-1072 Oct 11 j 06:07	9°Y22'44	-2.0m
max. Earth dist.	-1077 Jun 14 j 14:06	7°II27'53	2.64562 AU	asc. node	-1072 Nov 13 j 00:41	1°Y35'33	
morning rise	-1077 Jul 19 j 04:37	29°II37'10		direct	-1072 Nov 15 j 14:21	1°Y32'55	
	-1077 Jul 19 j 18:58	0°S			-1071 Feb 07 j 14:13	0°B	
	-1077 Sep 05 j 05:12	0°Q			-1071 Apr 02 j 16:30	0°II	
	-1077 Oct 23 j 02:58	0°M			-1071 May 22 j 22:13	0°S	
	-1077 Dec 11 j 01:57	0°A			-1071 Jul 09 j 21:22	0°Q	
	-1076 Feb 01 j 12:48	0°M		evening set	-1071 Aug 06 j 18:16	18°Q05'49	
desc. node	-1076 Apr 08 j 14:41	26°M42'53			-1071 Aug 24 j 15:29	0°M	
retrograde	-1076 Apr 23 j 23:07	28°M05'53		max. Earth dist.	-1071 Aug 26 j 05:43	1°M04'17	2.56933 AU
opposition	-1076 May 25 j 03:41	22°M40'51	-2°-59'-19				
greatest brilliancy	-1076 May 26 j 00:52	22°M25'34	-2.7m	conjunction	-1071 Sep 23 j 14:29	20°M29'03	0°39'51
min. Earth dist.	-1076 May 31 j 05:09	20°M56'10	0.40280 AU	minimum elong	-1071 Sep 23 j 15:52	20°M31'28	0°39'51
direct	-1076 Jun 27 j 07:20	16°M27'41			-1071 Oct 07 j 04:17	0°A	
	-1076 Aug 14 j 11:44	0°J		morning rise	-1071 Nov 12 j 18:23	26°A22'09	
	-1076 Oct 03 j 22:08	0°B			-1071 Nov 17 j 16:44	0°M	
	-1076 Nov 16 j 18:51	0°≈		desc. node	-1071 Nov 29 j 12:56	8°M47'17	
	-1076 Dec 29 j 21:46	0°H			-1071 Dec 27 j 15:34	0°J	
asc. node	-1075 Feb 08 j 02:29	27°H29'20			-1070 Feb 04 j 15:41	0°B	
	-1075 Feb 11 j 19:53	0°Y			-1070 Mar 15 j 12:09	0°≈	
	-1075 Mar 29 j 01:30	0°B			-1070 Apr 24 j 04:29	0°H	
	-1075 May 14 j 11:34	0°II			-1070 Jun 05 j 00:34	0°Y	
evening set	-1075 May 23 j 05:45	5°II36'02			-1070 Jul 21 j 14:29	0°B	
	-1075 Jun 30 j 12:46	0°S			-1070 Sep 29 j 01:25	0°II	
max. Earth dist.	-1075 Jul 07 j 06:37	4°S17'38	2.67355 AU	asc. node	-1070 Sep 30 j 23:05	0°II19'47	
				retrograde	-1070 Oct 14 j 01:11	1°II25'36	
conjunction	-1075 Jul 09 j 09:28	5°S38'35	1°05'48		-1070 Oct 28 j 07:00	30°R8	
minimum elong	-1075 Jul 09 j 08:40	5°S37'19	1°05'49	min. Earth dist.	-1070 Nov 18 j 15:51	23°B10'14	0.62450 AU
	-1075 Aug 16 j 12:01	0°Q		opposition	-1070 Nov 22 j 21:39	21°B28'21	2°05'31
morning rise	-1075 Aug 23 j 07:29	4°Q22'46		greatest brilliancy	-1070 Nov 22 j 09:43	21°B40'18	-1.5m
	-1075 Oct 01 j 19:50	0°M		direct	-1070 Dec 31 j 03:20	12°B28'46	
	-1075 Nov 16 j 07:14	0°A			-1069 Mar 04 j 11:03	0°II	
	-1075 Dec 31 j 00:51	0°M			-1069 May 01 j 05:08	0°S	
	-1074 Feb 13 j 10:15	0°J			-1069 Jun 20 j 10:45	0°Q	
desc. node	-1074 Feb 24 j 14:07	7°J30'48			-1069 Aug 05 j 21:09	0°M	
	-1074 Mar 30 j 13:39	0°B			-1069 Sep 18 j 08:32	0°A	
	-1074 May 20 j 01:30	0°≈		evening set	-1069 Sep 19 j 06:03	0°A38'18	
retrograde	-1074 Jul 11 j 18:20	15°≈46'19		max. Earth dist.	-1069 Oct 04 j 17:14	11°A45'55	2.45024 AU
min. Earth dist.	-1074 Aug 07 j 11:21	11°≈16'45	0.39702 AU	desc. node	-1069 Oct 17 j 11:53	21°A07'33	
greatest brilliancy	-1074 Aug 11 j 22:54	9°≈57'18	-2.7m		-1069 Oct 29 j 10:24	0°M	
opposition	-1074 Aug 13 j 12:45	9°≈29'07	-6°-24'-46				
direct	-1074 Sep 12 j 18:49	4°≈06'01		conjunction	-1069 Nov 12 j 12:13	10°M36'36	0°-17'-9
	-1074 Nov 27 j 04:30	0°H		minimum elong	-1069 Nov 12 j 11:08	10°M34'32	0°17'11
asc. node	-1074 Dec 27 j 01:19	16°H55'38			-1069 Dec 07 j 18:43	0°J	
	-1073 Jan 17 j 22:16	0°Y		greatest brilliancy	-1068 Jan 06 j 09:21	23°J06'14	1.2m
	-1073 Mar 07 j 19:32	0°B		morning rise	-1068 Jan 13 j 09:02	28°J35'19	
	-1073 Apr 25 j 04:16	0°II			-1068 Jan 15 j 04:10	0°B	
	-1073 Jun 12 j 03:58	0°S			-1068 Feb 22 j 11:23	0°≈	
evening set	-1073 Jun 30 j 10:55	11°S33'22			-1068 Apr 01 j 13:44	0°H	
	-1073 Jul 29 j 07:04	0°Q			-1068 May 12 j 08:45	0°Y	
max. Earth dist.	-1073 Jul 31 j 03:30	1°Q11'43	2.64730 AU		-1068 Jun 24 j 20:58	0°B	
					-1068 Aug 11 j 21:58	0°II	
conjunction	-1073 Aug 15 j 10:55	11°Q08'06	1°07'28	asc. node	-1068 Aug 17 j 22:08	3°II26'43	
minimum elong	-1073 Aug 15 j 11:32	11°Q09'07	1°07'28		-1068 Oct 13 j 00:13	0°S	
	-1073 Sep 13 j 00:58	0°M		retrograde	-1068 Nov 17 j 01:57	6°S37'32	
morning rise	-1073 Sep 29 j 21:54	11°M20'32			-1068 Dec 19 j 04:27	30°RII	
	-1073 Oct 27 j 03:34	0°A		opposition	-1068 Dec 27 j 03:00	26°II52'51	4°03'17
	-1073 Dec 08 j 15:55	0°M		greatest brilliancy	-1068 Dec 26 j 23:08	26°II56'44	-1.2m
desc. node	-1072 Jan 12 j 12:55	25°M20'38		min. Earth dist.	-1068 Dec 26 j 16:11	27°II03'42	0.67309 AU
	-1072 Jan 18 j 20:42	0°J		direct	-1067 Feb 05 j 13:43	17°II08'07	
	-1072 Feb 28 j 05:36	0°B			-1067 Mar 30 j 06:17	0°S	
	-1072 Apr 08 j 15:13	0°≈			-1067 May 28 j 05:22	0°Q	
	-1072 May 20 j 16:19	0°H			-1067 Jul 15 j 20:39	0°M	
	-1072 Jul 07 j 23:03	0°Y			-1067 Aug 28 j 22:29	0°A	
retrograde	-1072 Sep 03 j 20:14	18°Y22'06		desc. node	-1067 Sep 03 j 09:54	3°A53'36	
min. Earth dist.	-1072 Oct 04 j 08:00	11°Y58'42	0.51834 AU		-1067 Oct 09 j 00:20	0°M	
opposition	-1072 Oct 11 j 20:50	9°Y08'52	-1°-33'-8	evening set	-1067 Nov 13 j 15:20	27°M16'26	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 34

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1067 Nov 17 j 03:21	0°♊					-1062 Jul 26 j 17:36	0°♊			
	-1067 Dec 25 j 06:58	0°♋					-1062 Sep 12 j 13:41	0°♌			
							-1062 Oct 31 j 15:35	0°♍			
conjunction	-1066 Jan 17 j 19:42	18°♋33'17	-1°-5'-16				-1062 Dec 22 j 17:18	0°♎			
minimum elong	-1066 Jan 17 j 18:55	18°♋31'43	1°05'17				-1061 Feb 28 j 13:59	0°♏			
	-1066 Feb 01 j 10:13	0°♐			retrograde		-1061 Mar 27 j 10:04	3°♏58'32			
max. Earth dist.	-1066 Feb 28 j 22:37	21°♐16'03	2.38778 AU				-1061 Apr 22 j 03:30	30°♏			
	-1066 Mar 12 j 10:30	0°♑			desc. node		-1061 Apr 26 j 06:25	28°♏45'27			
morning rise	-1066 Mar 27 j 18:04	11°♑28'26			opposition		-1061 Apr 29 j 13:20	27°♏42'47	0°-11'-43		
	-1066 Apr 22 j 02:03	0°♒			greatest brilliancy		-1061 Mar 23 j 10:20	3°♏52'40	-2.7m		
	-1066 Jun 03 j 23:28	0°♓			min. Earth dist.		-1061 May 07 j 17:41	25°♏05'39	0.44857 AU		
asc. node	-1066 Jul 05 j 22:12	21°♓11'57			direct		-1061 Jun 04 j 14:58	20°♏07'28			
	-1066 Jul 19 j 15:44	0°♈					-1061 Jul 15 j 03:19	0°♏			
	-1066 Sep 07 j 08:08	0°♉					-1061 Sep 05 j 10:03	0°♐			
	-1066 Nov 06 j 22:02	0°♊					-1061 Oct 18 j 07:00	0°♋			
retrograde	-1066 Dec 22 j 09:03	10°♊07'31					-1061 Nov 28 j 11:39	0°♌			
opposition	-1065 Jan 30 j 11:58	1°♊00'28	4°42'00				-1060 Jan 09 j 01:41	0°♍			
greatest brilliancy	-1065 Jan 31 j 04:01	0°♊44'43	-1.3m				-1060 Feb 20 j 23:04	0°♎			
	-1065 Feb 02 j 01:31	30°♎			asc. node		-1060 Feb 25 j 18:35	3°♎17'51			
min. Earth dist.	-1065 Feb 02 j 22:04	29°♎39'51	0.65681 AU				-1060 Apr 05 j 11:45	0°♏			
direct	-1065 Mar 12 j 19:49	20°♎58'43			evening set		-1060 May 07 j 10:01	20°♏54'49			
	-1065 Apr 23 j 21:33	0°♏					-1060 May 21 j 11:11	0°♐			
	-1065 Jun 22 j 06:33	0°♑									
desc. node	-1065 Jul 22 j 08:44	18°♑57'23			conjunction		-1060 Jun 24 j 18:54	21°♐59'58	0°58'01		
	-1065 Aug 07 j 18:11	0°♒			minimum elong		-1060 Jun 24 j 17:43	21°♐58'05	0°58'02		
	-1065 Sep 18 j 13:59	0°♓			max. Earth dist.		-1060 Jun 28 j 09:05	24°♐17'25	2.66925 AU		
	-1065 Oct 27 j 22:37	0°♊					-1060 Jul 07 j 08:00	0°♑			
	-1065 Dec 05 j 04:46	0°♋			morning rise		-1060 Aug 09 j 08:13	21°♑01'50			
	-1064 Jan 12 j 11:21	0°♌					-1060 Aug 23 j 09:38	0°♒			
evening set	-1064 Jan 22 j 15:25	7°♌52'19					-1060 Oct 09 j 04:29	0°♓			
	-1064 Feb 20 j 16:54	0°♍					-1060 Nov 24 j 14:46	0°♔			
							-1059 Jan 10 j 01:26	0°♕			
conjunction	-1064 Mar 25 j 23:54	25°♍15'09	0°-34'-6				-1059 Feb 26 j 15:12	0°♎			
minimum elong	-1064 Mar 26 j 01:59	25°♍18'55	0°34'06		desc. node		-1059 Mar 13 j 06:46	8°♎50'01			
	-1064 Apr 01 j 14:21	0°♏					-1059 Apr 21 j 01:45	0°♐			
max. Earth dist.	-1064 May 04 j 10:23	23°♏03'28	2.51859 AU		retrograde		-1059 Jun 12 j 22:32	14°♐51'54			
	-1064 May 14 j 13:47	0°♑			min. Earth dist.		-1059 Jul 11 j 18:08	10°♐09'29	0.37573 AU		
morning rise	-1064 May 22 j 22:50	5°♑40'34			opposition		-1059 Jul 13 j 11:31	9°♐41'57	-6°-40'-1		
asc. node	-1064 May 22 j 20:53	5°♑37'17			greatest brilliancy		-1059 Jul 13 j 00:27	9°♐49'19	-2.9m		
	-1064 Jun 28 j 17:40	0°♒			direct		-1059 Aug 12 j 02:45	4°♐45'46			
	-1064 Aug 15 j 02:47	0°♓					-1059 Oct 23 j 11:30	0°♔			
	-1064 Oct 04 j 08:26	0°♔					-1059 Dec 12 j 05:25	0°♕			
retrograde	-1063 Jan 31 j 05:21	16°♕43'56			asc. node		-1058 Jan 12 j 16:51	20°♕03'24			
opposition	-1063 Mar 09 j 03:50	8°♕40'37	3°45'55				-1058 Jan 28 j 04:58	0°♖			
greatest brilliancy	-1063 Mar 10 j 11:41	8°♕10'49	-1.7m				-1058 Mar 16 j 03:39	0°♗			
min. Earth dist.	-1063 Mar 16 j 04:44	6°♕02'56	0.57608 AU		evening set		-1058 May 02 j 13:11	0°♘			
	-1063 Apr 06 j 18:00	30°♕					-1058 Jun 15 j 20:37	27°♕57'46			
direct	-1063 Apr 18 j 13:29	29°♕03'12			max. Earth dist.		-1058 Jun 19 j 01:51	0°♙			
	-1063 Apr 30 j 18:05	0°♖					-1058 Jul 21 j 16:38	20°♕45'20	2.66411 AU		
desc. node	-1063 Jun 08 j 08:00	12°♖35'16			conjunction		-1058 Jul 31 j 23:07	27°♕20'45	1°10'05		
	-1063 Jul 10 j 16:01	0°♗			minimum elong		-1058 Jul 31 j 23:10	27°♕20'50	1°10'05		
	-1063 Aug 25 j 02:13	0°♘					-1058 Aug 05 j 02:03	0°♚			
	-1063 Oct 04 j 19:48	0°♙			morning rise		-1058 Sep 14 j 18:58	26°♚33'10			
	-1063 Nov 12 j 20:42	0°♛					-1058 Sep 19 j 23:56	0°♜			
	-1063 Dec 21 j 18:43	0°♞					-1058 Nov 03 j 12:53	0°♝			
	-1062 Jan 30 j 15:34	0°♟					-1058 Dec 16 j 17:10	0°♞			
	-1062 Mar 13 j 03:57	0°♠					-1057 Jan 27 j 18:42	0°♟			
evening set	-1062 Mar 23 j 02:00	6°♠57'56			desc. node		-1057 Jan 29 j 06:30	1°♟04'29			
asc. node	-1062 Apr 09 j 19:21	19°♠13'49					-1057 Mar 10 j 05:01	0°♞			
	-1062 Apr 25 j 15:25	0°♓					-1057 Apr 21 j 02:20	0°♞			
							-1057 Jun 05 j 09:02	0°♟			
conjunction	-1062 May 16 j 00:42	13°♓38'01	0°21'00		retrograde		-1057 Aug 17 j 00:06	27°♟20'33			
minimum elong	-1062 May 15 j 23:46	13°♓36'29	0°21'01		min. Earth dist.		-1057 Sep 14 j 07:51	21°♟50'21	0.46711 AU		
max. Earth dist.	-1062 Jun 04 j 11:26	26°♓25'26	2.62001 AU		greatest brilliancy		-1057 Sep 21 j 03:14	19°♟26'57	-2.3m		
	-1062 Jun 09 j 23:08	0°♈			opposition		-1057 Sep 22 j 11:42	18°♟58'17	-3°-29'-52		
morning rise	-1062 Jul 04 j 12:41	15°♈51'14			direct		-1057 Oct 25 j 10:26	12°♟11'00			

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 35

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

asc. node	-1057 Nov 30 j 15:12	19° ✕ 23'32		conjunction	-1052 Dec 20 j 15:32	20° ✕ 24'37	0°-53'-45
	-1057 Dec 25 j 22:27	0° Υ		minimum elong	-1052 Dec 20 j 12:44	20° ✕ 19'07	0°53'46
	-1056 Feb 20 j 04:58	0° ♄			-1051 Jan 01 j 19:29	0° ♄	
	-1056 Apr 11 j 03:40	0° ♂			-1051 Feb 08 j 23:12	0° ≈	
	-1056 May 30 j 06:36	0° ♄		morning rise	-1051 Feb 27 j 15:15	14° ≈ 28'59	
	-1056 Jul 16 j 19:48	0° ♂			-1051 Mar 19 j 23:01	0° ✕	
evening set	-1056 Jul 22 j 14:31	3° ♂ 43'27			-1051 Apr 29 j 14:13	0° Υ	
max. Earth dist.	-1056 Aug 15 j 03:24	19° ♂ 05'32	2.60576 AU		-1051 Jun 11 j 14:02	0° ♄	
	-1056 Aug 31 j 12:44	0° ♄		asc. node	-1051 Jul 22 j 13:22	26° ♄ 43'40	
					-1051 Jul 27 j 19:06	0° ♂	
conjunction	-1056 Sep 07 j 07:06	4° ♄ 33'15	0°54'15		-1051 Sep 17 j 14:53	0° ♄	
minimum elong	-1056 Sep 07 j 08:24	4° ♄ 35'27	0°54'14	retrograde	-1051 Dec 08 j 08:18	27° ♄ 11'21	
	-1056 Oct 14 j 05:56	0° ♂		opposition	-1050 Jan 16 j 22:48	17° ♄ 47'06	4°36'18
morning rise	-1056 Oct 24 j 22:24	7° ♂ 32'36		greatest brilliancy	-1050 Jan 17 j 06:31	17° ♄ 39'26	-1.2m
	-1056 Nov 25 j 02:18	0° ♄		min. Earth dist.	-1050 Jan 18 j 20:24	17° ♄ 01'50	0.67094 AU
desc. node	-1056 Dec 16 j 05:01	15° ♄ 34'46		direct	-1050 Feb 27 j 02:18	7° ♄ 48'35	
	-1055 Jan 04 j 10:51	0° ✕			-1050 May 10 j 07:24	0° ♂	
	-1055 Feb 12 j 20:57	0° ♄			-1050 Jul 01 j 22:02	0° ♄	
	-1055 Mar 24 j 03:13	0° ≈		desc. node	-1050 Aug 08 j 01:01	24° ♄ 25'02	
	-1055 May 03 j 07:59	0° ✕			-1050 Aug 16 j 02:34	0° ♂	
	-1055 Jun 15 j 05:56	0° Υ			-1050 Sep 26 j 12:40	0° ♄	
	-1055 Aug 04 j 22:39	0° ♄			-1050 Nov 04 j 17:49	0° ✕	
retrograde	-1055 Sep 29 j 10:26	16° ♄ 16'24			-1050 Dec 12 j 21:57	0° ♄	
asc. node	-1055 Oct 17 j 14:49	13° ♄ 53'49		evening set	-1050 Dec 26 j 01:02	10° ♄ 21'27	
min. Earth dist.	-1055 Nov 02 j 03:56	8° ♄ 40'12	0.58863 AU	greatest brilliancy	-1049 Jan 10 j 09:09	22° ♄ 24'49	1.2m
opposition	-1055 Nov 07 j 19:40	6° ♄ 26'01	0°54'47		-1049 Jan 20 j 02:04	0° ≈	
greatest brilliancy	-1055 Nov 07 j 12:18	6° ♄ 33'18	-1.7m		-1049 Feb 28 j 04:15	0° ✕	
	-1055 Nov 27 j 01:44	30° ♄ Υ					
direct	-1055 Dec 14 j 19:48	27° Υ 53'25		conjunction	-1049 Mar 02 j 09:37	1° ✕ 40'24	0°-53'-49
	-1054 Jan 02 j 22:31	0° ♄		minimum elong	-1049 Mar 02 j 12:20	1° ✕ 45'30	0°53'49
	-1054 Mar 17 j 08:02	0° ♂			-1049 Apr 09 j 21:55	0° Υ	
	-1054 May 09 j 19:38	0° ♄		max. Earth dist.	-1049 Apr 18 j 16:26	6° Υ 16'15	2.46723 AU
	-1054 Jun 27 j 21:51	0° ♂		morning rise	-1049 May 04 j 01:31	17° Υ 05'55	
	-1054 Aug 12 j 23:56	0° ♄			-1049 May 22 j 18:36	0° ♄	
evening set	-1054 Sep 01 j 07:52	13° ♄ 08'00		asc. node	-1049 Jun 09 j 12:32	11° ♄ 57'55	
max. Earth dist.	-1054 Sep 16 j 14:05	23° ♄ 44'19	2.50007 AU		-1049 Jul 07 j 00:16	0° ♂	
	-1054 Sep 25 j 10:58	0° ♂			-1049 Aug 23 j 22:46	0° ♄	
					-1049 Oct 15 j 05:37	0° ♂	
conjunction	-1054 Oct 22 j 08:52	19° ♂ 25'32	0°07'43		-1049 Dec 27 j 17:14	0° ♄	
minimum elong	-1054 Oct 22 j 09:16	19° ♂ 26'16	0°07'43	retrograde	-1048 Jan 15 j 05:58	1° ♄ 55'54	
behind sun begin	-1054 Oct 21 j 13:07	18° ♂ 49'21			-1048 Feb 01 j 15:28	30° ♄ ♂	
behind sun end	-1054 Oct 23 j 05:25	20° ♂ 03'13		opposition	-1048 Feb 22 j 05:07	23° ♂ 23'37	4°22'08
desc. node	-1054 Nov 03 j 03:54	28° ♂ 07'58		greatest brilliancy	-1048 Feb 23 j 08:52	22° ♂ 56'59	-1.5m
	-1054 Nov 05 j 16:08	0° ♄		min. Earth dist.	-1048 Feb 27 j 22:03	21° ♂ 12'23	0.61495 AU
	-1054 Dec 15 j 05:15	0° ✕		direct	-1048 Apr 03 j 05:58	13° ♂ 29'23	
morning rise	-1054 Dec 17 j 18:08	1° ✕ 57'20			-1048 May 31 j 09:21	0° ♄	
	-1053 Jan 22 j 19:28	0° ♄		desc. node	-1048 Jun 25 j 00:15	13° ♄ 08'44	
	-1053 Mar 02 j 06:33	0° ≈			-1048 Jul 22 j 08:21	0° ♂	
	-1053 Apr 10 j 12:19	0° ✕			-1048 Sep 03 j 15:40	0° ♄	
	-1053 May 21 j 12:45	0° Υ			-1048 Oct 13 j 14:45	0° ✕	
	-1053 Jul 04 j 16:11	0° ♄			-1048 Nov 21 j 05:22	0° ♄	
	-1053 Aug 24 j 04:39	0° ♂			-1048 Dec 29 j 19:06	0° ≈	
asc. node	-1053 Sep 04 j 14:37	5° ♂ 47'50			-1047 Feb 07 j 08:04	0° ✕	
retrograde	-1053 Nov 04 j 17:09	23° ♂ 35'07		evening set	-1047 Mar 01 j 13:54	16° ✕ 22'09	
min. Earth dist.	-1053 Dec 12 j 20:18	14° ♂ 29'10	0.66150 AU		-1047 Mar 20 j 12:56	0° Υ	
opposition	-1053 Dec 14 j 19:22	13° ♂ 41'50	3°27'37	asc. node	-1047 Apr 26 j 11:23	25° Υ 43'48	
greatest brilliancy	-1053 Dec 14 j 10:01	13° ♂ 11'14	-1.3m				
direct	-1052 Jan 23 j 12:39	4° ♂ 11'26		conjunction	-1047 Apr 27 j 21:01	26° Υ 41'09	0°00'52
	-1052 Apr 13 j 07:22	0° ♄		minimum elong	-1047 Apr 27 j 21:01	26° Υ 41'09	0°00'51
	-1052 Jun 06 j 02:58	0° ♂		behind sun begin	-1047 Apr 26 j 22:28	26° Υ 02'44	
	-1052 Jul 23 j 15:02	0° ♄		behind sun end	-1047 Apr 28 j 19:33	27° Υ 19'31	
	-1052 Sep 05 j 09:21	0° ♂			-1047 May 02 j 18:02	0° ♄	
desc. node	-1052 Sep 20 j 02:45	10° ♂ 34'16		max. Earth dist.	-1047 May 24 j 14:42	14° ♄ 40'10	2.58618 AU
	-1052 Oct 16 j 10:12	0° ♄			-1047 Jun 16 j 22:27	0° ♂	
evening set	-1052 Oct 20 j 14:25	3° ♄ 08'31		morning rise	-1047 Jun 19 j 01:01	1° ♂ 22'15	
	-1052 Nov 24 j 14:29	0° ✕			-1047 Aug 02 j 19:41	0° ♄	
max. Earth dist.	-1052 Nov 27 j 00:21	1° ✕ 52'43	2.38001 AU		-1047 Sep 20 j 06:50	0° ♂	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 36

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1047 Nov 10 j 04:59	0°♎		asc. node	-1042 Dec 17 j 08:03	16°♐36'21	
	-1046 Jan 08 j 01:51	0°♊			-1041 Jan 10 j 09:44	0°♑	
retrograde	-1046 Mar 03 j 07:48	13°♊40'07			-1041 Mar 01 j 23:48	0°♒	
opposition	-1046 Apr 07 j 03:15	6°♊35'44	1°52'14		-1041 Apr 20 j 01:58	0°♓	
greatest brilliancy	-1046 Apr 08 j 01:57	6°♊15'55	-2.1m		-1041 Jun 07 j 10:00	0°♈	
min. Earth dist.	-1046 Apr 15 j 12:55	3°♊40'29	0.50089 AU	evening set	-1041 Jul 08 j 20:12	19°♈51'00	
	-1046 Apr 28 j 02:46	30°♋♎			-1041 Jul 24 j 16:23	0°♉	
desc. node	-1046 May 13 j 00:09	27°♎57'48		max. Earth dist.	-1041 Aug 05 j 20:54	7°♉53'11	2.63477 AU
direct	-1046 May 15 j 11:17	27°♎55'16					
	-1046 Jun 02 j 09:02	0°♊		conjunction	-1041 Aug 23 j 22:52	19°♉43'36	1°03'55
	-1046 Aug 05 j 12:25	0°♋		minimum elong	-1041 Aug 23 j 23:48	19°♉45'08	1°03'55
	-1046 Sep 18 j 11:15	0°♌			-1041 Sep 08 j 10:09	0°♍	
	-1046 Oct 28 j 23:31	0°♍		morning rise	-1041 Oct 08 j 23:32	20°♍43'01	
	-1046 Dec 07 j 21:08	0°♎			-1041 Oct 22 j 09:34	0°♏	
	-1045 Jan 17 j 13:10	0°♐			-1041 Dec 03 j 16:01	0°♑	
	-1045 Feb 28 j 17:50	0°♑		desc. node	-1040 Jan 02 j 21:50	22°♑07'09	
asc. node	-1045 Mar 14 j 09:26	9°♑26'19			-1040 Jan 13 j 12:49	0°♒	
	-1045 Apr 13 j 18:03	0°♒			-1040 Feb 22 j 12:10	0°♓	
evening set	-1045 Apr 21 j 14:42	5°♒14'08			-1040 Apr 02 j 09:05	0°♈	
	-1045 May 29 j 09:31	0°♓			-1040 May 13 j 11:50	0°♐	
					-1040 Jun 27 j 17:34	0°♑	
conjunction	-1045 Jun 10 j 16:39	7°♓56'32	0°46'30	retrograde	-1040 Sep 13 j 14:42	29°♑25'36	
minimum elong	-1045 Jun 10 j 15:18	7°♓54'21	0°46'30	min. Earth dist.	-1040 Oct 15 j 07:24	22°♑34'11	0.54516 AU
max. Earth dist.	-1045 Jun 20 j 03:49	14°♓01'35	2.65649 AU	opposition	-1040 Oct 22 j 05:42	19°♑54'04	0°-33'-39
	-1045 Jul 15 j 03:40	0°♈		greatest brilliancy	-1040 Oct 22 j 00:32	19°♑59'03	-1.9m
morning rise	-1045 Jul 27 j 08:30	7°♈45'51		asc. node	-1040 Nov 03 j 06:48	15°♑37'56	
	-1045 Aug 31 j 09:50	0°♉		direct	-1040 Nov 26 j 19:38	11°♑55'28	
	-1045 Oct 17 j 20:07	0°♊			-1039 Jan 29 j 06:31	0°♒	
	-1045 Dec 04 j 16:08	0°♋			-1039 Mar 27 j 15:01	0°♓	
	-1044 Jan 23 j 02:43	0°♌			-1039 May 17 j 19:08	0°♈	
	-1044 Mar 19 j 08:42	0°♍			-1039 Jul 05 j 02:55	0°♉	
desc. node	-1044 Mar 29 j 23:02	4°♍30'29		evening set	-1039 Aug 15 j 18:55	27°♉10'43	
retrograde	-1044 May 11 j 13:05	14°♍06'56			-1039 Aug 20 j 00:00	0°♊	
opposition	-1044 Jun 11 j 01:38	9°♍01'22	-4°-39'-36	max. Earth dist.	-1039 Sep 02 j 12:07	9°♊08'28	2.54631 AU
greatest brilliancy	-1044 Jun 11 j 19:49	8°♍48'53	-2.8m		-1039 Oct 02 j 12:35	0°♋	
min. Earth dist.	-1044 Jun 14 j 18:46	8°♍00'16	0.38534 AU				
direct	-1044 Jul 12 j 14:12	3°♍29'13		conjunction	-1039 Oct 03 j 13:08	0°♋43'26	0°29'21
	-1044 Sep 23 j 00:03	0°♎		minimum elong	-1039 Oct 03 j 14:21	0°♋45'36	0°29'20
	-1044 Nov 09 j 03:14	0°♏			-1039 Nov 12 j 22:50	0°♑	
	-1044 Dec 23 j 15:07	0°♐		desc. node	-1039 Nov 19 j 20:27	5°♑07'36	
asc. node	-1043 Jan 29 j 08:29	24°♐41'29		morning rise	-1039 Nov 24 j 13:20	8°♑38'21	
	-1043 Feb 06 j 07:47	0°♑			-1039 Dec 22 j 18:21	0°♒	
	-1043 Mar 24 j 00:33	0°♒			-1038 Jan 30 j 14:51	0°♓	
	-1043 May 09 j 17:19	0°♓			-1038 Mar 10 j 07:17	0°♈	
evening set	-1043 Jun 01 j 00:00	14°♓10'24			-1038 Apr 18 j 18:21	0°♐	
	-1043 Jun 25 j 21:56	0°♈			-1038 May 30 j 04:17	0°♑	
max. Earth dist.	-1043 Jul 12 j 14:03	10°♈36'39	2.67253 AU		-1038 Jul 14 j 11:38	0°♒	
					-1038 Sep 09 j 00:08	0°♓	
conjunction	-1043 Jul 17 j 15:47	13°♈50'40	1°08'32	asc. node	-1038 Sep 21 j 05:53	4°♓31'21	
minimum elong	-1043 Jul 17 j 15:17	13°♈49'52	1°08'33	retrograde	-1038 Oct 22 j 02:14	10°♓00'56	
	-1043 Aug 11 j 21:09	0°♉		min. Earth dist.	-1038 Nov 27 j 15:14	1°♓26'26	0.64024 AU
morning rise	-1043 Aug 31 j 09:31	12°♉36'13		opposition	-1038 Dec 01 j 01:58	0°♓03'19	2°39'42
	-1043 Sep 27 j 01:05	0°♊		greatest brilliancy	-1038 Nov 30 j 13:47	0°♓15'34	-1.4m
	-1043 Nov 11 j 03:27	0°♋			-1038 Dec 01 j 05:16	30°♒♒	
	-1043 Dec 25 j 05:23	0°♌		direct	-1037 Jan 08 j 21:22	20°♒51'28	
	-1042 Feb 06 j 13:49	0°♍			-1037 Feb 21 j 02:25	0°♓	
desc. node	-1042 Feb 14 j 22:22	5°♍48'39			-1037 Apr 25 j 00:28	0°♈	
	-1042 Mar 21 j 20:55	0°♎			-1037 Jun 15 j 06:44	0°♉	
	-1042 May 06 j 05:24	0°♏			-1037 Aug 01 j 01:34	0°♊	
	-1042 Jul 07 j 22:55	0°♐			-1037 Sep 13 j 15:34	0°♋	
retrograde	-1042 Jul 25 j 22:18	2°♐14'36		evening set	-1037 Sep 30 j 07:50	11°♋59'29	
	-1042 Aug 12 j 20:43	30°♒♒		desc. node	-1037 Oct 07 j 19:08	17°♋26'55	
min. Earth dist.	-1042 Aug 21 j 18:36	27°♒30'31	0.41882 AU	max. Earth dist.	-1037 Oct 18 j 10:21	25°♋18'20	2.42233 AU
greatest brilliancy	-1042 Aug 27 j 11:00	25°♒42'26	-2.6m		-1037 Oct 24 j 17:17	0°♌	
opposition	-1042 Aug 29 j 04:56	25°♒09'00	-5°-31'-4				
direct	-1042 Sep 29 j 05:51	19°♒17'09		conjunction	-1037 Nov 25 j 19:45	24°♌26'16	0°-31'-41
	-1042 Nov 13 j 00:40	0°♐		minimum elong	-1037 Nov 25 j 17:42	24°♌22'19	0°31'42

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 37

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1037 Dec 03 j 00:14	0°♏		opposition	-1031 Mar 19 j 00:30	18°♎29'45	3°13'28
	-1036 Jan 10 j 08:06	0°♏		greatest brilliancy	-1031 Mar 20 j 07:50	18°♎00'58	-1.8m
morning rise	-1036 Jan 29 j 19:22	15°♏18'41		min. Earth dist.	-1031 Mar 26 j 15:59	15°♎41'46	0.55101 AU
	-1036 Feb 17 j 13:46	0°♎		direct	-1031 Apr 27 j 20:14	9°♎07'35	
	-1036 Mar 27 j 14:32	0°♋		desc. node	-1031 May 29 j 16:06	15°♎05'39	
	-1036 May 07 j 07:03	0°♊			-1031 Jul 01 j 11:07	0°♎	
	-1036 Jun 19 j 12:20	0°♉			-1031 Aug 18 j 10:43	0°♎	
	-1036 Aug 05 j 15:15	0°♈			-1031 Sep 28 j 22:54	0°♏	
asc. node	-1036 Aug 08 j 05:46	1°♈33'30			-1031 Nov 07 j 09:17	0°♏	
	-1036 Sep 30 j 19:02	0°♏			-1031 Dec 16 j 13:39	0°♎	
retrograde	-1036 Nov 24 j 18:39	14°♏24'48			-1030 Jan 25 j 15:30	0°♋	
opposition	-1035 Jan 03 j 16:36	4°♏46'22	4°18'41		-1030 Mar 08 j 08:08	0°♊	
greatest brilliancy	-1035 Jan 03 j 16:29	4°♏46'29	-1.2m	asc. node	-1030 Mar 31 j 02:18	15°♊49'21	
min. Earth dist.	-1035 Jan 04 j 01:32	4°♏37'26	0.67518 AU	evening set	-1030 Apr 03 j 06:50	18°♊00'35	
	-1035 Jan 16 j 05:11	30°♊			-1030 Apr 20 j 22:34	0°♋	
direct	-1035 Feb 13 j 10:24	24°♊55'35					
	-1035 Mar 16 j 12:04	0°♏		conjunction	-1030 May 25 j 16:39	23°♋03'44	0°31'19
	-1035 May 21 j 19:54	0°♎		minimum elong	-1030 May 25 j 15:26	23°♋01'45	0°31'20
	-1035 Jul 10 j 13:48	0°♎			-1030 Jun 05 j 07:52	0°♈	
desc. node	-1035 Aug 24 j 18:38	0°♎32'21		max. Earth dist.	-1030 Jun 10 j 09:55	3°♈18'08	2.63514 AU
	-1035 Aug 24 j 00:16	0°♎		morning rise	-1030 Jul 13 j 00:30	24°♈15'24	
	-1035 Oct 04 j 04:56	0°♎			-1030 Jul 22 j 01:03	0°♏	
	-1035 Nov 12 j 08:29	0°♏			-1030 Sep 07 j 14:45	0°♎	
evening set	-1035 Nov 28 j 10:20	12°♏35'40			-1030 Oct 25 j 23:18	0°♎	
	-1035 Dec 20 j 11:55	0°♏			-1030 Dec 15 j 00:45	0°♎	
	-1034 Jan 27 j 14:48	0°♎			-1029 Feb 09 j 03:27	0°♎	
conjunction	-1034 Feb 03 j 00:48	5°♎00'02	-1°-5'-2	retrograde	-1029 Apr 11 j 22:21	17°♎27'07	
minimum elong	-1034 Feb 03 j 01:47	5°♎01'57	1°05'03	desc. node	-1029 Apr 16 j 15:20	17°♎18'55	
	-1034 Mar 07 j 14:52	0°♋		opposition	-1029 May 13 j 23:03	11°♎40'22	-1°-42'-30
max. Earth dist.	-1034 Mar 25 j 08:29	13°♋16'04	2.41422 AU	greatest brilliancy	-1029 May 14 j 15:12	11°♎28'07	-2.6m
morning rise	-1034 Apr 11 j 06:42	25°♋40'37		min. Earth dist.	-1029 May 21 j 07:10	9°♎27'18	0.42169 AU
	-1034 Apr 17 j 06:13	0°♊		direct	-1029 Jun 17 j 11:56	4°♎49'37	
	-1034 May 30 j 01:59	0°♉			-1029 Aug 25 j 20:09	0°♏	
asc. node	-1034 Jun 26 j 03:50	18°♉06'20			-1029 Oct 10 j 15:45	0°♏	
	-1034 Jul 14 j 12:26	0°♈			-1029 Nov 22 j 01:46	0°♎	
	-1034 Sep 01 j 08:26	0°♏			-1028 Jan 03 j 08:58	0°♋	
	-1034 Oct 27 j 10:22	0°♎		asc. node	-1028 Feb 15 j 18:04	0°♊	
retrograde	-1034 Dec 30 j 18:35	18°♎09'36			-1028 Feb 16 j 00:49	0°♊11'30	
opposition	-1033 Feb 07 j 12:43	9°♎13'41	4°38'57	evening set	-1028 Mar 31 j 14:29	0°♋	
greatest brilliancy	-1033 Feb 08 j 09:14	8°♎53'40	-1.3m		-1028 May 16 j 13:46	29°♋51'49	
min. Earth dist.	-1033 Feb 11 j 18:17	7°♎34'35	0.64477 AU		-1028 May 16 j 18:51	0°♈	
	-1033 Mar 09 j 20:26	30°♋			-1028 Jul 02 j 17:34	0°♏	
direct	-1033 Mar 20 j 19:52	29°♏12'37		conjunction	-1028 Jul 03 j 05:14	0°♏18'35	1°03'00
	-1033 Apr 01 j 05:46	0°♎		minimum elong	-1028 Jul 03 j 04:16	0°♏17'01	1°03'01
	-1033 Jun 15 j 06:27	0°♎		max. Earth dist.	-1028 Jul 03 j 16:29	0°♏36'29	2.67266 AU
desc. node	-1033 Jul 12 j 17:36	16°♎36'23		morning rise	-1028 Aug 17 j 08:37	29°♏07'00	
	-1033 Aug 02 j 02:37	0°♎			-1028 Aug 18 j 17:43	0°♎	
	-1033 Sep 13 j 09:01	0°♎			-1028 Oct 04 j 06:29	0°♎	
	-1033 Oct 22 j 22:03	0°♏			-1028 Nov 19 j 03:29	0°♎	
	-1033 Nov 30 j 06:36	0°♏			-1027 Jan 03 j 13:25	0°♎	
	-1032 Jan 07 j 14:46	0°♎			-1027 Feb 18 j 02:10	0°♏	
evening set	-1032 Feb 06 j 09:42	22°♎50'40		desc. node	-1027 Mar 03 j 14:56	8°♏46'49	
	-1032 Feb 15 j 21:42	0°♋			-1027 Apr 06 j 12:31	0°♏	
	-1032 Mar 27 j 20:30	0°♊			-1027 Jun 08 j 14:55	0°♎	
conjunction	-1032 Apr 07 j 15:19	7°♊39'56	0°-21'-18	retrograde	-1027 Jun 29 j 17:48	2°♎54'15	
minimum elong	-1032 Apr 07 j 16:36	7°♊42'13	0°21'18		-1027 Jul 21 j 01:29	30°♋	
	-1032 May 09 j 20:32	0°♉		min. Earth dist.	-1027 Jul 26 j 23:19	28°♏26'29	0.38400 AU
max. Earth dist.	-1032 May 12 j 12:27	1°♉48'37	2.54446 AU	greatest brilliancy	-1027 Jul 30 j 03:59	27°♏32'53	-2.8m
asc. node	-1032 May 13 j 02:25	2°♉12'18		opposition	-1027 Jul 31 j 08:15	27°♏13'01	-6°-47'-35
morning rise	-1032 Jun 02 j 07:14	15°♉45'41		direct	-1027 Aug 30 j 03:32	22°♏07'53	
	-1032 Jun 23 j 23:19	0°♈			-1027 Oct 06 j 01:10	0°♎	
	-1032 Aug 10 j 02:15	0°♏			-1027 Dec 03 j 16:53	0°♋	
	-1032 Sep 28 j 12:09	0°♎		asc. node	-1026 Jan 02 j 23:08	18°♋17'11	
	-1032 Nov 21 j 14:06	0°♎			-1026 Jan 21 j 20:26	0°♊	
retrograde	-1031 Feb 10 j 18:35	26°♎14'15			-1026 Mar 10 j 17:56	0°♋	
					-1026 Apr 27 j 15:20	0°♈	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 38

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1026 Jun 14 j 09:54	0°☿							-1021 Jan 17 j 22:47	0°♄			
evening set	-1026 Jun 24 j 06:01	6°☿13'09							-1021 Feb 25 j 07:17	0°♊			
max. Earth dist.	-1026 Jul 27 j 02:31	27°☿10'20	2.65576 AU		greatest brilliancy	-1021 Mar 12 j 02:26	11°♊27'30	1.2m	-1021 Apr 05 j 09:58	0°♋			
	-1026 Jul 31 j 11:55	0°♌							-1021 May 16 j 05:37	0°♎			
conjunction	-1026 Aug 09 j 05:50	5°♌39'08	1°09'04						-1021 Jun 28 j 21:10	0°♏			
minimum elong	-1026 Aug 09 j 06:14	5°♌39'47	1°09'04						-1021 Aug 16 j 15:11	0°♐			
	-1026 Sep 15 j 08:12	0°♑			asc. node	-1021 Aug 25 j 20:01	5°♐05'09		-1021 Oct 27 j 03:46	0°♑			
morning rise	-1026 Sep 23 j 08:13	5°♑20'22							-1021 Nov 12 j 10:23	1°♑35'16			
	-1026 Oct 29 j 15:51	0°♒			retrograde	-1021 Nov 27 j 18:34	30°♒		-1021 Dec 21 j 08:52	22°♒13'34	0.66923 AU		
desc. node	-1025 Jan 19 j 13:43	28°♒11'16			min. Earth dist.	-1021 Dec 22 j 12:13	21°♒46'04	3°49'52	-1021 Dec 22 j 05:34	21°♒52'45	-1.3m		
	-1025 Jan 22 j 01:19	0°♓			opposition	-1020 Jan 31 j 15:28	12°♒07'19		-1020 Apr 04 j 21:26	0°♑			
	-1025 Mar 03 j 20:33	0°♄			greatest brilliancy	-1020 May 31 j 08:58	0°♌		-1020 Jul 18 j 13:38	0°♑			
	-1025 Apr 13 j 18:40	0°♊			direct	-1020 Aug 31 j 13:35	0°♒		-1020 Sep 10 j 10:52	7°♒03'06			
	-1025 May 26 j 19:07	0°♋				-1020 Oct 11 j 16:12	0°♓		-1020 Nov 02 j 19:17	16°♓48'29			
	-1025 Jul 18 j 07:01	0°♎				-1020 Nov 19 j 20:26	0°♓		-1020 Dec 28 j 00:54	0°♄			
retrograde	-1025 Aug 28 j 01:04	10°♎06'46											
min. Earth dist.	-1025 Sep 26 j 13:14	4°♎06'34	0.49557 AU										
greatest brilliancy	-1025 Oct 03 j 12:01	1°♎33'52	-2.1m		desc. node	-1019 Jan 05 j 07:27	6°♄31'47	-1°-1'-59	-1019 Jan 05 j 05:28	6°♄27'51	1°02'01		
opposition	-1025 Oct 04 j 10:30	1°♎13'11	-2°-21'-19			max. Earth dist.	-1019 Jan 21 j 12:02	19°♄17'20	2.37399 AU	-1019 Feb 04 j 04:02	0°♊		
	-1025 Oct 07 j 19:16	30°♋			evening set	-1019 Feb 04 j 04:02	0°♊		-1019 Mar 15 j 19:52	0°♋31'40			
direct	-1025 Nov 07 j 09:30	23°♋57'47				-1019 Mar 15 j 03:07	0°♋		-1019 Apr 24 j 17:10	0°♎			
asc. node	-1025 Nov 20 j 22:37	25°♋06'34				-1019 Jun 06 j 13:39	0°♏		-1019 Jul 12 j 19:59	23°♏56'33			
	-1025 Dec 10 j 09:20	0°♏			conjunction	-1019 Jul 22 j 08:45	0°♐		-1019 Sep 10 j 16:26	0°♑			
	-1024 Feb 13 j 01:42	0°♏			minimum elong	-1019 Nov 15 j 15:31	0°♌		-1019 Dec 16 j 08:17	5°♌02'07			
	-1024 Apr 05 j 14:58	0°♐				-1018 Jan 13 j 10:12	30°♌☿		-1018 Jan 24 j 16:22	25°♌46'50	4°40'57		
	-1024 May 25 j 08:36	0°♑			max. Earth dist.	-1018 Jan 25 j 04:39	25°♌34'42	-1.3m	-1018 Jan 27 j 09:48	24°♌42'12	0.66443 AU		
	-1024 Jul 12 j 03:56	0°♒			morning rise	-1018 Mar 06 j 22:30	15°♌45'53		-1018 Mar 06 j 22:30	15°♌45'53			
evening set	-1024 Jul 31 j 04:33	12°♒18'02				-1018 Apr 30 j 23:09	0°♌		-1018 Apr 30 j 23:09	0°♌			
max. Earth dist.	-1024 Aug 21 j 10:31	26°♒19'05	2.58654 AU			-1018 Jun 25 j 20:57	0°♑		-1018 Jun 25 j 20:57	0°♑			
	-1024 Aug 26 j 22:36	0°♑				-1018 Jul 29 j 09:36	21°♑32'09		-1018 Aug 10 j 19:35	0°♒			
						-1018 Sep 21 j 12:11	0°♓		-1018 Oct 30 j 19:44	0°♓			
conjunction	-1024 Sep 16 j 10:40	13°♑54'39	0°46'31		asc. node	-1018 Dec 08 j 01:04	0°♄		-1017 Jan 10 j 17:50	26°♄28'57			
minimum elong	-1024 Sep 16 j 12:04	13°♑57'03	0°46'30			-1017 Jan 15 j 06:06	0°♊		-1017 Feb 23 j 09:09	0°♋			
	-1024 Oct 09 j 14:18	0°♒											
morning rise	-1024 Nov 04 j 08:29	18°♒22'50											
	-1024 Nov 20 j 07:04	0°♓			retrograde	-1017 Mar 16 j 16:16	15°♋50'44	0°-43'-9	-1017 Mar 16 j 18:50	15°♋55'26	0°43'09		
desc. node	-1024 Dec 06 j 13:36	12°♓02'37				-1017 Apr 05 j 03:44	0°♎		-1017 Apr 28 j 21:24	16°♎48'17	2.49618 AU		
	-1024 Dec 30 j 10:30	0°♓			opposition	-1017 May 15 j 16:14	28°♎24'00		-1017 May 18 j 00:26	0°♏			
	-1023 Feb 07 j 15:02	0°♄			greatest brilliancy	-1017 May 30 j 19:06	8°♏39'01		-1017 Jul 02 j 03:30	0°♐			
	-1023 Mar 18 j 15:09	0°♊			min. Earth dist.	-1017 Jul 02 j 03:30	0°♐		-1017 Aug 18 j 16:10	0°♑			
	-1023 Apr 27 j 11:14	0°♋			direct	-1017 Oct 08 j 13:49	0°♌		-1017 Oct 08 j 13:49	0°♌			
	-1023 Jun 08 j 14:54	0°♎				-1017 Dec 08 j 12:09	0°♑		-1016 Jan 24 j 17:18	10°♑40'57			
	-1023 Jul 26 j 07:51	0°♏				-1016 Mar 02 j 03:13	2°♑23'43	4°03'31					
retrograde	-1023 Oct 07 j 22:22	25°♏33'45			desc. node								
asc. node	-1023 Oct 07 j 21:28	25°♏33'45											
min. Earth dist.	-1023 Nov 11 j 17:24	17°♏35'08	0.60964 AU										
opposition	-1023 Nov 16 j 14:38	15°♏38'13	1°37'51										
greatest brilliancy	-1023 Nov 16 j 03:42	15°♏49'07	-1.6m										
direct	-1023 Dec 24 j 07:27	6°♏50'00			evening set								
	-1022 Mar 09 j 11:57	0°♐											
	-1022 May 04 j 04:41	0°♑											
	-1022 Jun 22 j 22:54	0°♒											
	-1022 Aug 08 j 07:01	0°♑			conjunction								
evening set	-1022 Sep 11 j 06:59	23°♑16'57			minimum elong								
	-1022 Sep 20 j 19:33	0°♒											
max. Earth dist.	-1022 Sep 26 j 06:15	3°♒52'42	2.47293 AU		max. Earth dist.								
desc. node	-1022 Oct 24 j 12:38	24°♒26'45			morning rise								
	-1022 Nov 01 j 00:01	0°♓											
					asc. node								
conjunction	-1022 Nov 02 j 23:31	1°♓28'43	0°-6'-16										
minimum elong	-1022 Nov 02 j 23:09	1°♓28'02	0°06'16										
behind sun begin	-1022 Nov 02 j 01:11	0°♓46'59											
behind sun end	-1022 Nov 03 j 21:07	2°♓09'06											
	-1022 Dec 10 j 11:03	0°♓			retrograde								
morning rise	-1021 Jan 01 j 07:37	16°♓59'00			opposition								

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 39

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

greatest brilliancy	-1016 Mar 03 j 09:34	1° $\mathring{\text{M}}$ 54'56	-1.6m		-1011 Jan 31 j 14:13	0° $\mathring{\text{Y}}$	
	-1016 Mar 08 j 11:01	30° $\mathring{\text{R}}$ Ω			-1011 Mar 18 j 21:35	0° $\mathring{\text{B}}$	
min. Earth dist.	-1016 Mar 08 j 13:51	29° Ω 57'21	0.59467 AU		-1011 May 04 j 22:43	0° Π	
direct	-1016 Apr 11 j 20:29	22° Ω 37'13		evening set	-1011 Jun 09 j 13:09	22° Π 32'48	
	-1016 May 18 j 06:59	0° $\mathring{\text{M}}$			-1011 Jun 21 j 07:24	0° $\mathring{\text{S}}$	
desc. node	-1016 Jun 15 j 08:58	12° $\mathring{\text{M}}$ 40'22		max. Earth dist.	-1011 Jul 17 j 21:05	16° $\mathring{\text{S}}$ 54'16	2.66894 AU
	-1016 Jul 15 j 09:28	0° $\mathring{\text{A}}$					
	-1016 Aug 28 j 19:43	0° $\mathring{\text{M}}$		conjunction	-1011 Jul 25 j 20:13	21° $\mathring{\text{S}}$ 59'46	1°09'54
	-1016 Oct 08 j 04:50	0° $\mathring{\text{A}}$		minimum elong	-1011 Jul 25 j 20:02	21° $\mathring{\text{S}}$ 59'28	1°09'56
	-1016 Nov 16 j 00:48	0° $\mathring{\text{S}}$			-1011 Aug 07 j 07:22	0° Ω	
	-1016 Dec 24 j 18:20	0° \approx		morning rise	-1011 Sep 08 j 13:26	20° Ω 56'02	
	-1015 Feb 02 j 10:21	0° $\mathring{\text{H}}$			-1011 Sep 22 j 08:27	0° $\mathring{\text{M}}$	
evening set	-1015 Mar 14 j 01:45	28° $\mathring{\text{H}}$ 48'26			-1011 Nov 06 j 03:38	0° $\mathring{\text{A}}$	
	-1015 Mar 15 j 18:04	0° $\mathring{\text{Y}}$			-1011 Dec 19 j 17:31	0° $\mathring{\text{M}}$	
asc. node	-1015 Apr 16 j 17:25	22° $\mathring{\text{Y}}$ 17'03			-1010 Jan 31 j 07:30	0° $\mathring{\text{A}}$	
	-1015 Apr 28 j 01:16	0° $\mathring{\text{B}}$		desc. node	-1010 Feb 05 j 07:32	3° $\mathring{\text{A}}$ 33'19	
					-1010 Mar 14 j 10:27	0° $\mathring{\text{S}}$	
conjunction	-1015 May 08 j 10:37	7° $\mathring{\text{B}}$ 00'02	0°12'50		-1010 Apr 26 j 09:38	0° \approx	
minimum elong	-1015 May 08 j 09:59	6° $\mathring{\text{B}}$ 58'59	0°12'50		-1010 Jun 13 j 19:04	0° $\mathring{\text{H}}$	
behind sun begin	-1015 May 07 j 21:01	6° $\mathring{\text{B}}$ 37'15		retrograde	-1010 Aug 07 j 22:32	17° $\mathring{\text{H}}$ 24'11	
behind sun end	-1015 May 08 j 22:57	7° $\mathring{\text{B}}$ 20'42		min. Earth dist.	-1010 Sep 04 j 09:59	12° $\mathring{\text{H}}$ 16'36	0.44456 AU
max. Earth dist.	-1015 May 31 j 00:35	21° $\mathring{\text{B}}$ 59'28	2.60588 AU	greatest brilliancy	-1010 Sep 10 j 21:20	10° $\mathring{\text{H}}$ 05'56	-2.4m
	-1015 Jun 12 j 06:23	0° Π		opposition	-1010 Sep 12 j 11:39	9° $\mathring{\text{H}}$ 33'27	-4°-23'-26
morning rise	-1015 Jun 28 j 00:56	10° Π 13'02		direct	-1010 Oct 14 j 14:15	3° $\mathring{\text{H}}$ 10'34	
	-1015 Jul 29 j 00:56	0° $\mathring{\text{S}}$		asc. node	-1010 Dec 07 j 13:23	17° $\mathring{\text{H}}$ 42'38	
	-1015 Sep 15 j 02:17	0° Ω			-1009 Jan 01 j 13:22	0° $\mathring{\text{Y}}$	
	-1015 Nov 03 j 20:03	0° $\mathring{\text{M}}$			-1009 Feb 23 j 19:26	0° $\mathring{\text{B}}$	
	-1015 Dec 27 j 23:39	0° $\mathring{\text{A}}$			-1009 Apr 14 j 20:46	0° Π	
retrograde	-1014 Mar 16 j 09:57	25° $\mathring{\text{A}}$ 12'09			-1009 Jun 02 j 15:06	0° $\mathring{\text{S}}$	
opposition	-1014 Apr 19 j 08:39	18° $\mathring{\text{A}}$ 33'40	0°47'00	evening set	-1009 Jul 17 j 06:05	28° $\mathring{\text{S}}$ 11'15	
greatest brilliancy	-1014 Apr 19 j 19:10	18° $\mathring{\text{A}}$ 24'52	-2.2m		-1009 Jul 20 j 01:47	0° Ω	
min. Earth dist.	-1014 Apr 27 j 19:53	15° $\mathring{\text{A}}$ 44'24	0.47186 AU	max. Earth dist.	-1009 Aug 11 j 17:33	14° Ω 42'09	2.61979 AU
desc. node	-1014 May 03 j 07:13	14° $\mathring{\text{A}}$ 03'32					
direct	-1014 May 26 j 13:05	10° $\mathring{\text{A}}$ 26'23		conjunction	-1009 Sep 01 j 14:48	28° Ω 31'03	0°58'52
	-1014 Jul 25 j 18:19	0° $\mathring{\text{M}}$		minimum elong	-1009 Sep 01 j 15:58	28° Ω 33'01	0°58'52
	-1014 Sep 11 j 00:09	0° $\mathring{\text{A}}$			-1009 Sep 03 j 20:01	0° $\mathring{\text{M}}$	
	-1014 Oct 22 j 14:56	0° $\mathring{\text{S}}$			-1009 Oct 17 j 16:49	0° $\mathring{\text{A}}$	
	-1014 Dec 02 j 03:28	0° \approx		morning rise	-1009 Oct 18 j 10:19	0° $\mathring{\text{A}}$ 30'35	
	-1013 Jan 12 j 05:37	0° $\mathring{\text{H}}$			-1009 Nov 28 j 18:30	0° $\mathring{\text{M}}$	
	-1013 Feb 23 j 17:51	0° $\mathring{\text{Y}}$		desc. node	-1009 Dec 24 j 06:09	18° $\mathring{\text{M}}$ 43'35	
asc. node	-1013 Mar 04 j 16:46	6° $\mathring{\text{Y}}$ 10'12			-1008 Jan 08 j 08:51	0° $\mathring{\text{A}}$	
	-1013 Apr 08 j 23:24	0° $\mathring{\text{B}}$			-1008 Feb 17 j 00:42	0° $\mathring{\text{S}}$	
evening set	-1013 May 01 j 08:20	14° $\mathring{\text{B}}$ 46'02			-1008 Mar 27 j 12:34	0° \approx	
	-1013 May 24 j 18:17	0° Π			-1008 May 07 j 00:12	0° $\mathring{\text{H}}$	
					-1008 Jun 19 j 14:30	0° $\mathring{\text{Y}}$	
conjunction	-1013 Jun 19 j 09:56	16° Π 29'58	0°53'38		-1008 Aug 12 j 22:23	0° $\mathring{\text{B}}$	
minimum elong	-1013 Jun 19 j 08:38	16° Π 27'53	0°53'38	retrograde	-1008 Sep 22 j 19:59	9° $\mathring{\text{B}}$ 43'05	
max. Earth dist.	-1013 Jun 25 j 14:24	20° Π 27'24	2.66458 AU	asc. node	-1008 Oct 24 j 13:00	2° $\mathring{\text{B}}$ 52'09	
	-1013 Jul 10 j 13:13	0° $\mathring{\text{S}}$		min. Earth dist.	-1008 Oct 25 j 16:02	2° $\mathring{\text{B}}$ 26'12	0.56995 AU
morning rise	-1013 Aug 04 j 09:29	15° $\mathring{\text{S}}$ 48'57		opposition	-1008 Oct 31 j 22:03	29° $\mathring{\text{Y}}$ 59'13	0°19'45
	-1013 Aug 26 j 16:35	0° Ω			-1008 Oct 31 j 21:15	30° $\mathring{\text{R}}$ $\mathring{\text{Y}}$	
	-1013 Oct 12 j 17:50	0° $\mathring{\text{M}}$		greatest brilliancy	-1008 Oct 31 j 18:58	0° $\mathring{\text{B}}$ 02'14	-1.8m
	-1013 Nov 28 j 17:18	0° $\mathring{\text{A}}$		direct	-1008 Dec 07 j 07:06	21° $\mathring{\text{Y}}$ 41'01	
	-1012 Jan 15 j 06:02	0° $\mathring{\text{M}}$			-1007 Jan 16 j 15:00	0° $\mathring{\text{B}}$	
	-1012 Mar 05 j 07:16	0° $\mathring{\text{A}}$			-1007 Mar 21 j 02:34	0° Π	
desc. node	-1012 Mar 20 j 07:07	8° $\mathring{\text{A}}$ 13'55			-1007 May 12 j 12:38	0° $\mathring{\text{S}}$	
	-1012 May 14 j 04:36	0° $\mathring{\text{S}}$			-1007 Jun 30 j 07:31	0° Ω	
retrograde	-1012 May 29 j 21:10	1° $\mathring{\text{S}}$ 31'33			-1007 Aug 15 j 08:39	0° $\mathring{\text{M}}$	
	-1012 Jun 14 j 14:41	30° $\mathring{\text{R}}$ $\mathring{\text{A}}$		evening set	-1007 Aug 25 j 01:43	6° $\mathring{\text{M}}$ 33'05	
opposition	-1012 Jun 29 j 03:36	26° $\mathring{\text{A}}$ 31'57	-6°-2'-18	max. Earth dist.	-1007 Sep 10 j 06:33	17° $\mathring{\text{M}}$ 39'31	2.52142 AU
greatest brilliancy	-1012 Jun 29 j 07:50	26° $\mathring{\text{A}}$ 29'09	-2.9m		-1007 Sep 27 j 21:25	0° $\mathring{\text{A}}$	
min. Earth dist.	-1012 Jun 29 j 21:53	26° $\mathring{\text{A}}$ 19'52	0.37604 AU				
direct	-1012 Jul 29 j 06:36	21° $\mathring{\text{A}}$ 28'15		conjunction	-1007 Oct 13 j 23:26	11° $\mathring{\text{A}}$ 29'54	0°17'26
	-1012 Sep 05 j 05:33	0° $\mathring{\text{S}}$		minimum elong	-1007 Oct 14 j 00:17	11° $\mathring{\text{A}}$ 31'25	0°17'25
	-1012 Oct 31 j 00:15	0° \approx			-1007 Nov 08 j 05:50	0° $\mathring{\text{M}}$	
	-1012 Dec 16 j 19:21	0° $\mathring{\text{H}}$		desc. node	-1007 Nov 10 j 04:39	1° $\mathring{\text{M}}$ 26'58	
asc. node	-1011 Jan 19 j 15:14	22° $\mathring{\text{H}}$ 10'45		morning rise	-1007 Dec 07 j 05:40	21° $\mathring{\text{M}}$ 49'10	

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-1007 Dec 17 j 22:19	0°♊					-1001 Jun 07 j 03:17	0°♎			
	-1006 Jan 25 j 15:26	0°♋			desc. node		-1001 Jul 03 j 01:01	14°♎43'50			
	-1006 Mar 05 j 04:37	0°♌					-1001 Jul 27 j 01:36	0°♍			
	-1006 Apr 13 j 11:39	0°♍					-1001 Sep 07 j 22:25	0°♎			
	-1006 May 24 j 14:12	0°♎					-1001 Oct 17 j 17:26	0°♏			
	-1006 Jul 08 j 01:14	0°♏					-1001 Nov 25 j 05:17	0°♐			
	-1006 Aug 29 j 03:57	0°♑					-1000 Jan 02 j 16:06	0°♑			
asc. node	-1006 Sep 11 j 13:04	6°♑13'48					-1000 Feb 11 j 01:23	0°♒			
retrograde	-1006 Oct 29 j 23:18	18°♑20'09			evening set		-1000 Feb 20 j 09:59	6°♒57'49			
min. Earth dist.	-1006 Dec 06 j 09:23	9°♑28'04	0.65313 AU				-1000 Mar 23 j 02:17	0°♓			
opposition	-1006 Dec 09 j 00:50	8°♑24'15	3°09'13								
greatest brilliancy	-1006 Dec 08 j 13:41	8°♑35'27	-1.3m		conjunction		-1000 Apr 19 j 09:59	19°♓12'09	0°-8'-27		
	-1005 Jan 05 j 03:28	30°♒♏			minimum elong		-1000 Apr 19 j 10:27	19°♓12'58	0°08'27		
direct	-1005 Jan 17 j 08:46	29°♒01'48			behind sun begin		-1000 Apr 18 j 14:23	18°♓38'15			
	-1005 Jan 30 j 07:11	0°♑			behind sun end		-1000 Apr 20 j 06:32	19°♓47'39			
	-1005 Apr 18 j 06:07	0°♒			asc. node		-1000 May 03 j 09:49	28°♓48'36			
	-1005 Jun 09 j 22:28	0°♑					-1000 May 05 j 03:46	0°♒			
	-1005 Jul 27 j 04:27	0°♎			max. Earth dist.		-1000 May 19 j 18:07	9°♒51'23	2.56842 AU		
	-1005 Sep 08 j 22:12	0°♍			morning rise		-1000 Jun 12 j 00:36	25°♒16'39			
desc. node	-1005 Sep 28 j 03:44	13°♍49'48					-1000 Jun 19 j 06:03	0°♑			
evening set	-1005 Oct 12 j 00:49	24°♍02'24					-1000 Aug 05 j 04:23	0°♒			
	-1005 Oct 20 j 00:40	0°♎					-1000 Sep 22 j 23:26	0°♑			
max. Earth dist.	-1005 Nov 05 j 01:41	12°♎07'41	2.39672 AU				-1000 Nov 13 j 23:06	0°♎			
	-1005 Nov 28 j 06:43	0°♊					-999 Jan 18 j 03:07	0°♍			
					retrograde		-999 Feb 22 j 00:22	6°♍17'32			
conjunction	-1005 Dec 09 j 23:47	9°♊07'55	0°-45'-3				-999 Mar 26 j 09:49	30°♒♎			
minimum elong	-1005 Dec 09 j 21:04	9°♊02'36	0°45'03		opposition		-999 Mar 29 j 12:38	28°♎53'57	2°31'08		
	-1004 Jan 05 j 13:04	0°♋			greatest brilliancy		-999 Mar 30 j 16:28	28°♎29'00	-1.9m		
	-1004 Feb 12 j 17:17	0°♌			min. Earth dist.		-999 Apr 06 j 16:14	25°♎59'32	0.52394 AU		
morning rise	-1004 Feb 15 j 14:28	2°♌14'54			direct		-999 May 07 j 14:28	19°♎52'16			
	-1004 Mar 22 j 16:34	0°♍			desc. node		-999 May 20 j 01:00	20°♎52'48			
	-1004 May 02 j 06:52	0°♎					-999 Jun 18 j 17:24	0°♍			
	-1004 Jun 14 j 07:02	0°♏					-999 Aug 10 j 23:38	0°♎			
asc. node	-1004 Jul 29 j 11:42	29°♏13'41					-999 Sep 22 j 16:20	0°♏			
	-1004 Jul 30 j 17:48	0°♑					-999 Nov 01 j 15:20	0°♐			
	-1004 Sep 21 j 19:17	0°♒					-999 Dec 11 j 03:57	0°♑			
retrograde	-1004 Dec 02 j 13:13	22°♒12'29					-998 Jan 20 j 12:11	0°♒			
opposition	-1003 Jan 11 j 07:10	12°♒41'25	4°30'13				-998 Mar 03 j 10:00	0°♓			
greatest brilliancy	-1003 Jan 11 j 11:15	12°♒37'21	-1.2m		asc. node		-998 Mar 21 j 07:52	12°♓25'51			
min. Earth dist.	-1003 Jan 12 j 12:01	12°♒12'39	0.67410 AU		evening set		-998 Apr 13 j 22:44	28°♓29'31			
direct	-1003 Feb 21 j 06:35	2°♒45'57					-998 Apr 16 j 04:36	0°♒			
	-1003 May 14 j 16:57	0°♑					-998 May 31 j 16:17	0°♑			
	-1003 Jul 05 j 00:39	0°♎									
desc. node	-1003 Aug 15 j 02:15	27°♎19'10			conjunction		-998 Jun 03 j 23:32	2°♑08'31	0°40'33		
	-1003 Aug 18 j 22:31	0°♍			minimum elong		-998 Jun 03 j 22:11	2°♑06'20	0°40'33		
	-1003 Sep 29 j 07:32	0°♎			max. Earth dist.		-998 Jun 16 j 02:16	9°♑58'11	2.64808 AU		
	-1003 Nov 07 j 12:40	0°♏					-998 Jul 17 j 09:15	0°♒			
evening set	-1003 Dec 13 j 19:50	28°♏31'32			morning rise		-998 Jul 21 j 07:07	2°♒29'21			
	-1003 Dec 15 j 16:38	0°♐					-998 Sep 02 j 18:14	0°♑			
	-1002 Jan 22 j 19:51	0°♑					-998 Oct 20 j 13:10	0°♎			
							-998 Dec 08 j 05:00	0°♍			
conjunction	-1002 Feb 18 j 17:39	20°♑48'07	-1°00'-5				-997 Jan 28 j 17:53	0°♎			
minimum elong	-1002 Feb 18 j 19:57	20°♑52'30	1°00'06		desc. node		-997 Apr 06 j 23:55	29°♎34'24			
	-1002 Mar 02 j 20:08	0°♒					-997 Apr 08 j 20:38	0°♏			
max. Earth dist.	-1002 Apr 09 j 11:38	27°♒50'30	2.44325 AU		retrograde		-997 Apr 28 j 16:48	2°♏17'31			
	-1002 Apr 12 j 11:25	0°♓					-997 May 18 j 01:51	30°♒♎			
morning rise	-1002 Apr 24 j 13:52	8°♓39'06			opposition		-997 May 29 j 18:11	26°♎56'28	-3°-22'-50		
	-1002 May 25 j 06:08	0°♒			greatest brilliancy		-997 May 30 j 16:06	26°♎40'44	-2.7m		
asc. node	-1002 Jun 16 j 10:37	14°♒55'43			min. Earth dist.		-997 Jun 04 j 09:48	25°♎19'27	0.39909 AU		
	-1002 Jul 09 j 11:53	0°♑			direct		-997 Jul 01 j 15:06	20°♎50'57			
	-1002 Aug 26 j 16:36	0°♒					-997 Aug 09 j 06:42	0°♏			
retrograde	-1002 Oct 19 j 03:27	0°♑					-997 Oct 01 j 15:28	0°♐			
opposition	-1001 Jan 08 j 11:43	26°♑24'09					-997 Nov 15 j 01:35	0°♑			
greatest brilliancy	-1001 Feb 15 j 19:35	17°♑40'37	4°30'57				-997 Dec 28 j 09:17	0°♒			
min. Earth dist.	-1001 Feb 16 j 20:14	17°♑16'44	-1.4m		asc. node		-996 Feb 06 j 06:27	27°♒13'49			
direct	-1001 Feb 20 j 20:30	15°♑43'37	0.62944 AU				-996 Feb 10 j 09:07	0°♓			
	-1001 Mar 28 j 23:34	7°♑42'23					-996 Mar 26 j 15:12	0°♒			

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 41

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-996 May 12 j 01:28	0° II					-991 Jun 02 j 12:43	0° Y		
evening set	-996 May 25 j 12:04	8° II 35'23					-991 Jul 18 j 12:29	0° B		
	-996 Jun 28 j 03:03	0° ☿					-991 Sep 18 j 22:11	0° II		
max. Earth dist.	-996 Jul 08 j 23:33	6° ☿ 54'30	2.67372 AU		asc. node		-991 Sep 28 j 04:02	2° II 23'45		
					retrograde		-991 Oct 16 j 03:28	4° II 25'08		
conjunction	-996 Jul 11 j 12:59	8° ☿ 32'18	1°06'42				-991 Nov 10 j 10:55	30° R B		
minimum elong	-996 Jul 11 j 12:15	8° ☿ 31'09	1°06'43		min. Earth dist.		-991 Nov 20 j 21:54	26° B 06'22	0.62765 AU	
	-996 Aug 14 j 02:50	0° ♈			greatest brilliancy		-991 Nov 24 j 12:15	24° B 39'51	-1.5m	
morning rise	-996 Aug 25 j 09:19	7° ♈ 14'58			opposition		-991 Nov 25 j 00:41	24° B 27'23	2°15'42	
	-996 Sep 29 j 10:49	0° ♍			direct		-990 Jan 02 j 08:42	15° B 25'32		
	-996 Nov 13 j 21:21	0° ♊					-990 Feb 28 j 01:25	0° II		
	-996 Dec 28 j 12:27	0° ♋					-990 Apr 28 j 06:17	0° ☿		
	-995 Feb 10 j 16:36	0° ♌					-990 Jun 17 j 21:16	0° ♈		
desc. node	-995 Feb 21 j 23:06	7° ♌ 38'42					-990 Aug 03 j 12:36	0° ♍		
	-995 Mar 27 j 08:15	0° ♍					-990 Sep 16 j 03:11	0° ♊		
	-995 May 15 j 00:33	0° ♋			evening set		-990 Sep 21 j 20:55	4° ♊ 05'18		
retrograde	-995 Jul 15 j 01:27	20° ♋ 17'40			max. Earth dist.		-990 Oct 07 j 18:45	15° ♊ 34'58	2.44478 AU	
min. Earth dist.	-995 Aug 10 j 17:45	15° ♋ 46'44	0.40068 AU		desc. node		-990 Oct 14 j 19:39	20° ♊ 44'36		
greatest brilliancy	-995 Aug 15 j 12:11	14° ♋ 21'01	-2.7m				-990 Oct 27 j 07:10	0° ♋		
opposition	-995 Aug 17 j 03:29	13° ♋ 51'24	-6°-14'-36							
direct	-995 Sep 16 j 11:00	8° ♋ 23'19			conjunction		-990 Nov 15 j 13:06	14° ♋ 31'28	0°-20'-49	
	-995 Nov 22 j 23:28	0° ♌			minimum elong		-990 Nov 15 j 11:46	14° ♋ 28'56	0°20'49	
asc. node	-995 Dec 24 j 05:58	17° ♌ 13'33					-990 Dec 05 j 16:41	0° ♌		
	-994 Jan 14 j 22:03	0° ♍					-989 Jan 13 j 02:27	0° ♍		
	-994 Mar 05 j 03:16	0° B			morning rise		-989 Jan 17 j 01:06	3° ♍ 05'53		
	-994 Apr 22 j 15:20	0° II					-989 Feb 20 j 09:09	0° ♋		
	-994 Jun 09 j 17:05	0° ☿					-989 Mar 31 j 09:59	0° ♌		
evening set	-994 Jul 02 j 15:01	14° ☿ 28'14					-989 May 11 j 02:16	0° ♍		
	-994 Jul 26 j 22:01	0° ♈					-989 Jun 23 j 09:34	0° B		
max. Earth dist.	-994 Aug 01 j 16:55	3° ♈ 44'07	2.64522 AU				-989 Aug 09 j 23:22	0° II		
					asc. node		-989 Aug 16 j 03:39	3° II 36'03		
conjunction	-994 Aug 17 j 14:51	14° ♈ 04'50	1°06'36				-989 Oct 08 j 06:35	0° ☿		
minimum elong	-994 Aug 17 j 15:34	14° ♈ 06'00	1°06'37		retrograde		-989 Nov 20 j 02:24	9° ☿ 25'52		
	-994 Sep 10 j 17:36	0° ♍					-989 Dec 29 j 08:31	30° R II		
morning rise	-994 Oct 02 j 03:19	14° ♍ 23'54			opposition		-989 Dec 30 j 02:24	29° II 42'04	4°08'00	
	-994 Oct 24 j 21:26	0° ♊			greatest brilliancy		-989 Dec 29 j 23:06	29° II 45'23	-1.2m	
	-994 Dec 06 j 10:18	0° ♋			min. Earth dist.		-989 Dec 29 j 18:37	29° II 49'53	0.67378 AU	
desc. node	-993 Jan 09 j 22:41	25° ♋ 05'18			direct		-988 Feb 08 j 14:12	19° II 56'18		
	-993 Jan 16 j 14:41	0° ♌					-988 Mar 25 j 06:55	0° ☿		
	-993 Feb 25 j 22:04	0° ♍					-988 May 25 j 07:02	0° ♈		
	-993 Apr 07 j 04:15	0° ♋					-988 Jul 13 j 09:23	0° ♍		
	-993 May 18 j 21:12	0° ♌					-988 Aug 26 j 16:32	0° ♊		
	-993 Jul 04 j 22:33	0° ♍			desc. node		-988 Aug 31 j 19:23	3° ♊ 37'29		
retrograde	-993 Sep 07 j 07:44	21° ♍ 52'39					-988 Oct 06 j 21:22	0° ♋		
min. Earth dist.	-993 Oct 08 j 01:25	15° ♍ 23'10	0.52346 AU				-988 Nov 15 j 01:49	0° ♌		
opposition	-993 Oct 15 j 11:01	12° ♍ 35'06	-1°-17'-7		evening set		-988 Nov 16 j 22:44	1° ♌ 27'33		
greatest brilliancy	-993 Oct 14 j 22:47	12° ♍ 46'43	-2.0m				-988 Dec 23 j 05:40	0° ♍		
asc. node	-993 Nov 11 j 05:06	5° ♍ 21'20								
direct	-993 Nov 19 j 07:34	4° ♍ 54'41			conjunction		-987 Jan 21 j 12:35	23° ♍ 05'31	-1°-5'-37	
	-992 Feb 04 j 21:17	0° B			minimum elong		-987 Jan 21 j 12:12	23° ♍ 04'47	1°05'40	
	-992 Mar 30 j 19:28	0° II					-987 Jan 30 j 08:13	0° ♋		
	-992 May 20 j 07:53	0° ☿			max. Earth dist.		-987 Mar 08 j 08:09	28° ♋ 31'14	2.39238 AU	
	-992 Jul 07 j 10:53	0° ♈					-987 Mar 10 j 07:01	0° ♌		
evening set	-992 Aug 09 j 00:24	21° ♈ 08'22			morning rise		-987 Mar 31 j 05:46	15° ♌ 40'25		
	-992 Aug 22 j 07:56	0° ♍					-987 Apr 19 j 20:27	0° ♍		
max. Earth dist.	-992 Aug 28 j 06:31	3° ♍ 59'47	2.56522 AU				-987 Jun 01 j 14:58	0° B		
					asc. node		-987 Jul 03 j 02:03	20° B 57'38		
conjunction	-992 Sep 26 j 00:19	23° ♍ 43'26	0°37'11				-987 Jul 17 j 02:49	0° II		
minimum elong	-992 Sep 26 j 01:40	23° ♍ 45'48	0°37'10				-987 Sep 04 j 09:35	0° ☿		
	-992 Oct 04 j 23:02	0° ♊					-987 Nov 01 j 23:57	0° ♈		
morning rise	-992 Nov 15 j 11:34	29° ♊ 57'07			retrograde		-987 Dec 24 j 12:33	12° ♊ 57'40		
	-992 Nov 15 j 13:08	0° ♋			opposition		-986 Feb 01 j 13:15	3° ♊ 52'32	4°41'08	
desc. node	-992 Nov 26 j 21:21	8° ♋ 24'19			greatest brilliancy		-986 Feb 02 j 06:04	3° ♊ 36'01	-1.3m	
	-992 Dec 25 j 12:50	0° ♌			min. Earth dist.		-986 Feb 05 j 02:13	2° ♊ 29'05	0.65488 AU	
	-991 Feb 02 j 12:56	0° ♍					-986 Feb 11 j 15:09	30° R ☿		
	-991 Mar 13 j 08:20	0° ♋			direct		-986 Mar 14 j 20:27	23° ☿ 50'55		
	-991 Apr 21 j 22:04	0° ♌					-986 Apr 17 j 20:11	0° ♈		

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 42

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-986 Jun 19 j 07:46	0° \mathbb{M}		minimum elong	-981 Jun 27 j 22:03	24° \mathbb{I} 53'20	0°59'32
desc. node	-986 Jul 19 j 18:37	18° \mathbb{M} 56'13		max. Earth dist.	-981 Jun 30 j 23:39	26° \mathbb{I} 50'42	2.67006 AU
	-986 Aug 05 j 08:04	0° $\underline{\mathbb{A}}$			-981 Jul 05 j 22:23	0° \mathfrak{S}	
	-986 Sep 16 j 09:18	0° \mathbb{M}		morning rise	-981 Aug 12 j 10:02	23° \mathfrak{S} 53'25	
	-986 Oct 25 j 20:29	0° \mathfrak{A}			-981 Aug 21 j 23:46	0° \mathcal{Q}	
	-986 Dec 03 j 03:27	0° \mathfrak{Z}			-981 Oct 07 j 17:49	0° \mathbb{M}	
	-985 Jan 10 j 09:37	0° \approx			-981 Nov 23 j 01:52	0° $\underline{\mathbb{A}}$	
evening set	-985 Jan 26 j 01:06	12° \approx 06'08			-980 Jan 08 j 07:17	0° \mathbb{M}	
	-985 Feb 18 j 13:46	0° \mathfrak{H}			-980 Feb 24 j 08:24	0° \mathfrak{A}	
				desc. node	-980 Mar 10 j 15:45	9° \mathfrak{A} 24'56	
conjunction	-985 Mar 30 j 01:30	29° \mathfrak{H} 03'03	0°-30'-51		-980 Apr 15 j 17:59	0° \mathfrak{Z}	
minimum elong	-985 Mar 30 j 03:25	29° \mathfrak{H} 06'29	0°30'51	retrograde	-980 Jun 16 j 17:39	19° \mathfrak{Z} 33'53	
	-985 Mar 31 j 09:13	0° \mathbb{Y}		min. Earth dist.	-980 Jul 15 j 05:13	14° \mathfrak{Z} 55'08	0.37647 AU
max. Earth dist.	-985 May 07 j 19:57	26° \mathbb{Y} 16'58	2.52360 AU	opposition	-980 Jul 17 j 10:04	14° \mathfrak{Z} 19'41	-6°-46'-3
	-985 May 13 j 06:20	0° \mathfrak{B}		greatest brilliancy	-980 Jul 16 j 19:51	14° \mathfrak{Z} 29'14	-2.9m
asc. node	-985 May 21 j 00:27	5° \mathfrak{B} 16'06		direct	-980 Aug 16 j 02:14	9° \mathfrak{Z} 23'18	
morning rise	-985 May 26 j 13:32	9° \mathfrak{B} 00'31			-980 Oct 19 j 00:56	0° \approx	
	-985 Jun 27 j 07:37	0° \mathbb{I}			-980 Dec 09 j 03:51	0° \mathfrak{H}	
	-985 Aug 13 j 13:06	0° \mathfrak{S}		asc. node	-979 Jan 09 j 21:21	20° \mathfrak{H} 01'50	
	-985 Oct 02 j 10:57	0° \mathcal{Q}			-979 Jan 25 j 12:30	0° \mathbb{Y}	
	-985 Nov 27 j 13:17	0° \mathbb{M}			-979 Mar 13 j 14:41	0° \mathfrak{B}	
retrograde	-984 Feb 03 j 17:16	19° \mathbb{M} 49'05			-979 Apr 30 j 01:55	0° \mathbb{I}	
opposition	-984 Mar 11 j 12:42	11° \mathbb{M} 48'54	3°37'30		-979 Jun 16 j 15:50	0° \mathfrak{S}	
greatest brilliancy	-984 Mar 12 j 20:11	11° \mathbb{M} 19'31	-1.7m	evening set	-979 Jun 18 j 00:04	0° \mathfrak{S} 51'00	
min. Earth dist.	-984 Mar 18 j 15:49	9° \mathbb{M} 09'37	0.57163 AU	max. Earth dist.	-979 Jul 23 j 05:12	23° \mathfrak{S} 15'22	2.66263 AU
direct	-984 Apr 20 j 19:19	2° \mathbb{M} 14'08			-979 Aug 02 j 17:13	0° \mathcal{Q}	
desc. node	-984 Jun 05 j 16:54	13° \mathbb{M} 36'02					
	-984 Jul 07 j 09:17	0° $\underline{\mathbb{A}}$		conjunction	-979 Aug 03 j 01:55	0° \mathcal{Q} 14'01	1°09'55
	-984 Aug 22 j 13:20	0° \mathbb{M}		minimum elong	-979 Aug 03 j 02:04	0° \mathcal{Q} 14'15	1°09'56
	-984 Oct 02 j 13:01	0° \mathfrak{A}		morning rise	-979 Sep 16 j 22:35	29° \mathcal{Q} 31'07	
	-984 Nov 10 j 16:22	0° \mathfrak{Z}			-979 Sep 17 j 16:02	0° \mathbb{M}	
	-984 Dec 19 j 15:00	0° \approx			-979 Nov 01 j 05:21	0° $\underline{\mathbb{A}}$	
	-983 Jan 28 j 11:15	0° \mathfrak{H}			-979 Dec 14 j 09:12	0° \mathbb{M}	
	-983 Mar 10 j 22:19	0° \mathbb{Y}			-978 Jan 25 j 09:21	0° \mathfrak{A}	
evening set	-983 Mar 25 j 19:39	10° \mathbb{Y} 26'37		desc. node	-978 Jan 26 j 14:40	0° \mathfrak{A} 52'55	
asc. node	-983 Apr 07 j 00:16	18° \mathbb{Y} 52'30			-978 Mar 07 j 16:51	0° \mathfrak{Z}	
	-983 Apr 23 j 08:09	0° \mathfrak{B}			-978 Apr 18 j 07:58	0° \approx	
					-978 Jun 01 j 19:43	0° \mathfrak{H}	
conjunction	-983 May 18 j 11:34	16° \mathfrak{B} 48'13	0°23'55		-978 Aug 06 j 23:31	0° \mathbb{Y}	
minimum elong	-983 May 18 j 10:32	16° \mathfrak{B} 46'31	0°23'55	retrograde	-978 Aug 19 j 17:22	1° \mathbb{Y} 08'26	
max. Earth dist.	-983 Jun 06 j 04:06	29° \mathfrak{B} 04'21	2.62301 AU		-978 Sep 01 j 02:17	30° \mathfrak{R} \mathfrak{H}	
	-983 Jun 07 j 14:16	0° \mathbb{I}		min. Earth dist.	-978 Sep 17 j 06:40	25° \mathfrak{H} 31'38	0.47249 AU
morning rise	-983 Jul 06 j 17:42	18° \mathbb{I} 48'35		greatest brilliancy	-978 Sep 24 j 02:28	23° \mathfrak{H} 06'24	-2.3m
	-983 Jul 24 j 07:09	0° \mathfrak{S}		opposition	-978 Sep 25 j 08:30	22° \mathfrak{H} 39'35	-3°-12'-55
	-983 Sep 10 j 00:58	0° \mathcal{Q}		direct	-978 Oct 28 j 12:17	15° \mathfrak{H} 46'37	
	-983 Oct 28 j 21:45	0° \mathbb{M}		asc. node	-978 Nov 27 j 20:47	21° \mathfrak{H} 01'35	
	-983 Dec 19 j 08:22	0° $\underline{\mathbb{A}}$			-978 Dec 21 j 05:15	0° \mathbb{Y}	
	-982 Feb 20 j 03:01	0° \mathbb{M}			-977 Feb 17 j 03:38	0° \mathfrak{B}	
retrograde	-982 Mar 30 j 19:14	7° \mathbb{M} 42'56			-977 Apr 09 j 11:35	0° \mathbb{I}	
desc. node	-982 Apr 23 j 15:49	4° \mathbb{M} 15'42			-977 May 28 j 18:43	0° \mathfrak{S}	
opposition	-982 May 02 j 16:48	1° \mathbb{M} 32'55	0°-32'-29		-977 Jul 15 j 10:50	0° \mathcal{Q}	
greatest brilliancy	-982 May 02 j 23:05	1° \mathbb{M} 27'56	-2.4m	evening set	-977 Jul 25 j 17:33	6° \mathcal{Q} 37'21	
	-982 May 07 j 13:20	30° \mathfrak{R} $\underline{\mathbb{A}}$		max. Earth dist.	-977 Aug 17 j 18:36	21° \mathcal{Q} 41'38	2.60236 AU
min. Earth dist.	-982 May 10 j 19:25	28° $\underline{\mathbb{A}}$ 58'50	0.44326 AU		-977 Aug 30 j 06:08	0° \mathbb{M}	
direct	-982 Jun 07 j 12:58	24° $\underline{\mathbb{A}}$ 05'39					
	-982 Jul 08 j 01:26	0° \mathbb{M}		conjunction	-977 Sep 10 j 12:36	7° \mathbb{M} 35'19	0°52'18
	-982 Sep 02 j 04:08	0° \mathfrak{A}		minimum elong	-977 Sep 10 j 13:56	7° \mathbb{M} 37'35	0°52'18
	-982 Oct 15 j 15:09	0° \mathfrak{Z}			-977 Oct 13 j 01:05	0° $\underline{\mathbb{A}}$	
	-982 Nov 26 j 00:49	0° \approx		morning rise	-977 Oct 28 j 09:25	10° $\underline{\mathbb{A}}$ 50'44	
	-981 Jan 06 j 16:45	0° \mathfrak{H}			-977 Nov 23 j 22:25	0° \mathbb{M}	
	-981 Feb 18 j 14:32	0° \mathbb{Y}		desc. node	-977 Dec 14 j 14:16	15° \mathbb{M} 14'13	
asc. node	-981 Feb 22 j 23:11	2° \mathbb{Y} 59'16			-976 Jan 03 j 07:06	0° \mathfrak{A}	
	-981 Apr 04 j 02:56	0° \mathfrak{B}			-976 Feb 11 j 16:28	0° \mathfrak{Z}	
evening set	-981 May 10 j 17:55	23° \mathfrak{B} 58'07			-976 Mar 21 j 21:00	0° \approx	
	-981 May 20 j 01:54	0° \mathbb{I}			-976 Apr 30 j 22:11	0° \mathfrak{H}	
					-976 Jun 12 j 11:57	0° \mathbb{Y}	
conjunction	-981 Jun 27 j 23:11	24° \mathbb{I} 55'10	0°59'32		-976 Jul 31 j 21:51	0° \mathfrak{B}	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 43

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

retrograde	-976 Oct 01 j 14:09	19°♄23'36			-971 Nov 02 j 15:49	0°♄	
asc. node	-976 Oct 14 j 20:07	18°♄07'48			-971 Dec 10 j 20:35	0°♄	
min. Earth dist.	-976 Nov 04 j 12:52	11°♄43'07	0.59297 AU	greatest brilliancy	-971 Dec 29 j 08:24	14°♄34'56	1.2m
opposition	-976 Nov 10 j 01:29	9°♄31'42	1°07'08	evening set	-971 Dec 29 j 13:32	14°♄45'03	
greatest brilliancy	-976 Nov 09 j 16:46	9°♄40'21	-1.6m		-970 Jan 18 j 00:20	0°♄	
direct	-976 Dec 17 j 04:39	0°♄56'10			-970 Feb 26 j 01:20	0°♄	
	-975 Mar 13 j 22:26	0°♄					
	-975 May 07 j 02:03	0°♄		conjunction	-970 Mar 05 j 17:46	5°♄46'37	0°-51'-23
	-975 Jun 25 j 10:46	0°♄		minimum elong	-970 Mar 05 j 20:31	5°♄51'44	0°51'23
	-975 Aug 10 j 16:55	0°♄			-970 Apr 07 j 17:10	0°♄	
evening set	-975 Sep 03 j 16:12	16°♄17'13		max. Earth dist.	-970 Apr 21 j 10:51	9°♄48'37	2.47284 AU
max. Earth dist.	-975 Sep 18 j 22:01	26°♄54'52	2.49520 AU	morning rise	-970 May 06 j 21:44	20°♄38'58	
	-975 Sep 23 j 06:52	0°♄			-970 May 20 j 11:27	0°♄	
				asc. node	-970 Jun 06 j 17:28	11°♄39'57	
conjunction	-975 Oct 24 j 23:49	22°♄54'08	0°04'20		-970 Jul 04 j 13:52	0°♄	
minimum elong	-975 Oct 25 j 00:03	22°♄54'34	0°04'20		-970 Aug 21 j 07:01	0°♄	
behind sun begin	-975 Oct 24 j 01:58	22°♄13'59			-970 Oct 12 j 00:08	0°♄	
behind sun end	-975 Oct 25 j 22:07	23°♄35'12			-970 Dec 18 j 02:15	0°♄	
desc. node	-975 Oct 31 j 13:27	27°♄45'18		retrograde	-969 Jan 17 j 13:27	4°♄53'42	
	-975 Nov 03 j 14:00	0°♄			-969 Feb 14 j 11:38	30°♄	
	-975 Dec 13 j 04:05	0°♄		opposition	-969 Feb 24 j 09:55	26°♄23'51	4°17'03
morning rise	-975 Dec 20 j 22:07	5°♄59'02		greatest brilliancy	-969 Feb 25 j 13:54	25°♄57'00	-1.5m
	-974 Jan 20 j 18:15	0°♄		min. Earth dist.	-969 Mar 02 j 05:24	24°♄10'21	0.61149 AU
	-974 Feb 28 j 04:17	0°♄		direct	-969 Apr 06 j 08:59	16°♄30'54	
	-974 Apr 08 j 07:53	0°♄			-969 May 28 j 00:05	0°♄	
	-974 May 19 j 04:36	0°♄		desc. node	-969 Jun 23 j 09:47	13°♄32'26	
	-974 Jul 02 j 01:10	0°♄			-969 Jul 20 j 14:18	0°♄	
	-974 Aug 20 j 17:53	0°♄			-969 Sep 02 j 07:25	0°♄	
asc. node	-974 Sep 01 j 18:23	6°♄18'15			-969 Oct 12 j 10:31	0°♄	
retrograde	-974 Nov 06 j 17:35	26°♄27'17			-969 Nov 20 j 02:36	0°♄	
min. Earth dist.	-974 Dec 15 j 00:06	17°♄18'37	0.66334 AU		-969 Dec 28 j 16:17	0°♄	
opposition	-974 Dec 16 j 20:06	16°♄34'22	3°34'25		-968 Feb 06 j 04:12	0°♄	
greatest brilliancy	-974 Dec 16 j 11:03	16°♄43'29	-1.3m	evening set	-968 Mar 04 j 13:39	20°♄07'56	
direct	-973 Jan 25 j 15:27	7°♄02'30			-968 Mar 18 j 07:26	0°♄	
	-973 Apr 10 j 16:34	0°♄		asc. node	-968 Apr 23 j 15:49	25°♄22'26	
	-973 Jun 04 j 09:30	0°♄					
	-973 Jul 22 j 05:19	0°♄		conjunction	-968 Apr 30 j 11:48	0°♄01'54	0°04'08
	-973 Sep 04 j 04:01	0°♄		minimum elong	-968 Apr 30 j 11:34	0°♄01'31	0°04'08
desc. node	-973 Sep 18 j 12:03	10°♄15'16		behind sun begin	-968 Apr 29 j 13:38	29°♄24'15	
	-973 Oct 15 j 07:38	0°♄		behind sun end	-968 May 01 j 09:31	0°♄38'44	
evening set	-973 Oct 24 j 12:35	6°♄55'54			-968 Apr 30 j 10:41	0°♄	
	-973 Nov 23 j 13:28	0°♄		max. Earth dist.	-968 May 26 j 11:54	17°♄28'31	2.59007 AU
max. Earth dist.	-973 Dec 05 j 03:05	9°♄01'39	2.37731 AU	morning rise	-968 Jun 14 j 13:13	0°♄	
					-968 Jun 21 j 07:58	4°♄24'38	
conjunction	-973 Dec 25 j 01:19	24°♄41'19	0°-56'-1		-968 Jul 31 j 08:16	0°♄	
minimum elong	-973 Dec 24 j 22:39	24°♄36'04	0°56'02		-968 Sep 17 j 15:34	0°♄	
	-973 Dec 31 j 18:57	0°♄			-968 Nov 07 j 04:00	0°♄	
	-972 Feb 07 j 22:08	0°♄			-967 Jan 03 j 06:10	0°♄	
morning rise	-972 Mar 03 j 06:38	18°♄52'52		retrograde	-967 Mar 06 j 05:19	17°♄07'42	
	-972 Mar 17 j 20:27	0°♄		opposition	-967 Apr 09 j 22:26	10°♄07'57	1°36'32
	-972 Apr 27 j 09:06	0°♄		greatest brilliancy	-967 Apr 10 j 18:24	9°♄50'40	-2.1m
	-972 Jun 09 j 05:12	0°♄		min. Earth dist.	-967 Apr 18 j 09:43	7°♄12'58	0.49547 AU
asc. node	-972 Jul 19 j 17:53	26°♄35'23		desc. node	-967 May 10 j 08:14	1°♄58'28	
	-972 Jul 25 j 03:56	0°♄		direct	-967 May 18 j 01:53	1°♄33'32	
	-972 Sep 14 j 07:15	0°♄			-967 Aug 02 j 02:28	0°♄	
	-972 Dec 09 j 16:29	0°♄			-967 Sep 15 j 19:57	0°♄	
retrograde	-972 Dec 10 j 10:01	0°♄00'12			-967 Oct 26 j 14:25	0°♄	
	-972 Dec 11 j 03:30	30°♄			-967 Dec 05 j 14:20	0°♄	
opposition	-971 Jan 18 j 22:50	20°♄37'16	4°37'43		-966 Jan 15 j 06:48	0°♄	
greatest brilliancy	-971 Jan 19 j 07:20	20°♄28'50	-1.2m		-966 Feb 26 j 10:52	0°♄	
min. Earth dist.	-971 Jan 20 j 23:27	19°♄49'00	0.67009 AU	asc. node	-966 Mar 11 j 14:56	9°♄07'01	
direct	-971 Mar 01 j 02:33	10°♄38'15			-966 Apr 11 j 10:02	0°♄	
	-971 May 06 j 12:49	0°♄		evening set	-966 Apr 24 j 00:49	8°♄23'47	
	-971 Jun 29 j 05:34	0°♄			-966 May 27 j 00:32	0°♄	
desc. node	-971 Aug 05 j 10:38	24°♄16'12					
	-971 Aug 13 j 18:28	0°♄		conjunction	-966 Jun 12 j 21:52	10°♄54'14	0°48'35
	-971 Sep 24 j 08:39	0°♄		minimum elong	-966 Jun 12 j 20:31	10°♄52'03	0°48'35

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 44

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

max. Earth dist.	-966 Jun 21 j 15:26	16° II 30'43	2.65822 AU			-961 Oct 06 j 11:30	30° R Y	
	-966 Jul 12 j 17:58	0° S		min. Earth dist.		-961 Oct 18 j 20:51	25° Y 50'06	0.54980 AU
morning rise	-966 Jul 29 j 10:07	10° S 36'41		opposition		-961 Oct 25 j 16:23	23° Y 11'52	0°-18'-47
	-966 Aug 28 j 23:18	0° Q		greatest brilliancy		-961 Oct 27 j 04:25	22° Y 37'11	-1.9m
	-966 Oct 15 j 07:37	0° M		asc. node		-961 Nov 01 j 11:04	20° Y 40'01	
	-966 Dec 01 j 22:39	0° A		direct		-961 Nov 30 j 09:22	15° Y 09'41	
	-965 Jan 19 j 20:19	0° M				-960 Jan 25 j 18:16	0° B	
	-965 Mar 14 j 21:55	0° A				-960 Mar 24 j 14:37	0° II	
desc. node	-965 Mar 28 j 07:34	6° A 13'50				-960 May 15 j 04:00	0° S	
retrograde	-965 May 16 j 13:46	18° A 42'05				-960 Jul 02 j 16:37	0° Q	
opposition	-965 Jun 16 j 00:46	13° A 39'03	-5°-1'-13			-960 Aug 17 j 17:01	0° M	
greatest brilliancy	-965 Jun 16 j 16:59	13° A 28'03	-2.8m	evening set		-960 Aug 18 j 01:25	0° M 14'03	
min. Earth dist.	-965 Jun 19 j 04:44	12° A 47'36	0.38286 AU	max. Earth dist.		-960 Sep 04 j 11:42	12° M 02'00	2.54181 AU
direct	-965 Jul 17 j 04:10	8° A 13'58				-960 Sep 30 j 08:02	0° A	
	-965 Sep 19 j 13:56	0° B						
	-965 Nov 07 j 01:23	0° A		conjunction		-960 Oct 06 j 00:05	4° A 00'57	0°26'23
	-965 Dec 21 j 22:58	0° H		minimum elong		-960 Oct 06 j 01:14	4° A 02'58	0°26'22
asc. node	-964 Jan 27 j 13:32	24° H 31'12				-960 Nov 10 j 19:50	0° M	
	-964 Feb 04 j 19:28	0° Y		desc. node		-960 Nov 17 j 05:19	4° M 44'39	
	-964 Mar 21 j 13:43	0° B		morning rise		-960 Nov 27 j 09:44	12° M 21'25	
	-964 May 07 j 07:07	0° II				-960 Dec 20 j 16:07	0° A	
evening set	-964 Jun 03 j 04:11	17° II 05'15				-959 Jan 28 j 12:35	0° B	
	-964 Jun 23 j 12:21	0° S				-959 Mar 08 j 04:05	0° A	
max. Earth dist.	-964 Jul 14 j 05:48	13° S 11'14	2.67215 AU			-959 Apr 16 j 13:02	0° H	
						-959 May 27 j 18:40	0° Y	
conjunction	-964 Jul 19 j 17:52	16° S 41'50	1°09'02			-959 Jul 11 j 15:58	0° B	
minimum elong	-964 Jul 19 j 17:27	16° S 41'09	1°09'02			-959 Sep 04 j 04:07	0° II	
	-964 Aug 09 j 12:20	0° Q		asc. node		-959 Sep 18 j 11:09	5° II 47'57	
morning rise	-964 Sep 02 j 10:58	15° Q 28'09		retrograde		-959 Oct 24 j 03:16	12° II 56'42	
	-964 Sep 24 j 16:52	0° M		min. Earth dist.		-959 Nov 29 j 20:04	4° II 19'21	0.64288 AU
	-964 Nov 08 j 19:08	0° A		opposition		-959 Dec 03 j 03:52	2° II 59'10	2°48'36
	-964 Dec 22 j 19:40	0° M		greatest brilliancy		-959 Dec 02 j 15:31	3° II 11'35	-1.4m
	-963 Feb 04 j 00:49	0° A				-959 Dec 10 j 19:42	30° R B	
desc. node	-963 Feb 12 j 08:16	5° A 48'26		direct		-958 Jan 11 j 02:04	23° B 45'29	
	-963 Mar 19 j 01:00	0° B				-958 Feb 14 j 21:58	0° II	
	-963 May 02 j 15:20	0° A				-958 Apr 21 j 21:32	0° S	
	-963 Jun 27 j 05:38	0° H				-958 Jun 12 j 16:16	0° Q	
retrograde	-963 Jul 29 j 03:34	6° H 35'26				-958 Jul 29 j 17:08	0° M	
min. Earth dist.	-963 Aug 24 j 23:31	1° H 47'55	0.42332 AU			-958 Sep 11 j 10:58	0° A	
	-963 Aug 30 j 14:33	30° R A		evening set		-958 Oct 03 j 00:08	15° A 30'00	
greatest brilliancy	-963 Aug 30 j 21:24	29° A 54'27	-2.5m	desc. node		-958 Oct 05 j 04:19	17° A 05'21	
opposition	-963 Sep 01 j 14:48	29° A 21'04	-5°-15'-58	max. Earth dist.		-958 Oct 21 j 13:14	29° A 11'38	2.41735 AU
direct	-963 Oct 02 j 21:05	23° A 23'26				-958 Oct 22 j 15:07	0° M	
	-963 Nov 05 j 23:33	0° H						
asc. node	-963 Dec 14 j 11:40	17° H 13'30		conjunction		-958 Nov 28 j 22:45	28° M 25'52	0°-35'-2
	-962 Jan 07 j 00:44	0° Y		minimum elong		-958 Nov 28 j 20:30	28° M 21'32	0°35'02
	-962 Feb 27 j 04:41	0° B				-958 Nov 30 j 23:21	0° A	
	-962 Apr 17 j 12:03	0° II				-957 Jan 08 j 07:24	0° B	
	-962 Jun 04 j 22:58	0° S		morning rise		-957 Feb 02 j 12:29	19° B 49'47	
evening set	-962 Jul 10 j 23:44	22° S 44'50				-957 Feb 15 j 12:16	0° A	
	-962 Jul 22 j 07:31	0° Q				-957 Mar 26 j 11:20	0° H	
max. Earth dist.	-962 Aug 07 j 09:40	10° Q 24'33	2.63220 AU			-957 May 06 j 01:07	0° Y	
						-957 Jun 18 j 02:04	0° B	
conjunction	-962 Aug 26 j 02:45	22° Q 40'53	1°02'39			-957 Aug 03 j 20:15	0° II	
minimum elong	-962 Aug 26 j 03:44	22° Q 42'31	1°02'40	asc. node		-957 Aug 06 j 09:42	1° II 32'58	
	-962 Sep 06 j 03:07	0° M				-957 Sep 27 j 14:30	0° S	
morning rise	-962 Oct 11 j 06:02	23° M 49'40		retrograde		-957 Nov 27 j 19:27	17° S 13'59	
	-962 Oct 20 j 03:59	0° A		opposition		-956 Jan 06 j 16:40	7° S 36'42	4°22'16
	-962 Dec 01 j 11:17	0° M		greatest brilliancy		-956 Jan 06 j 17:16	7° S 36'06	-1.2m
desc. node	-962 Dec 31 j 07:05	21° M 48'20		min. Earth dist.		-956 Jan 07 j 04:44	7° S 24'38	0.67521 AU
	-961 Jan 11 j 08:13	0° A				-956 Jan 28 j 20:29	30° R II	
	-961 Feb 20 j 06:44	0° B		direct		-956 Feb 16 j 11:40	27° II 45'14	
	-961 Apr 01 j 01:19	0° A				-956 Mar 07 j 13:18	0° S	
	-961 May 11 j 22:29	0° H				-956 May 18 j 15:51	0° Q	
	-961 Jun 25 j 11:58	0° Y				-956 Jul 08 j 00:23	0° M	
	-961 Aug 27 j 09:56	0° B				-956 Aug 21 j 17:20	0° A	
retrograde	-961 Sep 16 j 22:48	2° B 46'18		desc. node		-956 Aug 22 j 03:18	0° A 17'29	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 45

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-956 Oct 02 j 01:40	0°♌			-951 Oct 23 j 07:45	0°♍		
	-956 Nov 10 j 07:15	0°♎			-951 Dec 11 j 23:36	0°♏		
evening set	-956 Dec 01 j 19:58	16°♐52'14			-950 Feb 04 j 13:17	0°♑		
	-956 Dec 18 j 11:21	0°♒		desc. node	-950 Apr 14 j 00:41	21°♌24'56		
	-955 Jan 25 j 13:46	0°♓		retrograde	-950 Apr 15 j 13:02	21°♌25'47		
				opposition	-950 May 17 j 08:08	15°♌44'00	-2°-5'-25	
conjunction	-955 Feb 06 j 13:55	9°♓20'54	-1°-4'-13	greatest brilliancy	-950 May 18 j 02:49	15°♌29'57	-2.6m	
minimum elong	-955 Feb 06 j 15:18	9°♓23'34	1°04'15	min. Earth dist.	-950 May 24 j 09:22	13°♌36'58	0.41713 AU	
	-955 Mar 05 j 12:25	0°♈		direct	-950 Jun 20 j 14:47	9°♌01'09		
max. Earth dist.	-955 Mar 28 j 22:01	17°♈29'15	2.41942 AU		-950 Aug 21 j 16:12	0°♉		
morning rise	-955 Apr 14 j 10:17	29°♈32'23			-950 Oct 07 j 17:14	0°♊		
	-955 Apr 15 j 01:35	0°♋			-950 Nov 19 j 11:34	0°♋		
	-955 May 27 j 18:28	0°♌			-950 Dec 31 j 21:53	0°♈		
asc. node	-955 Jun 23 j 08:28	17°♌50'28		asc. node	-949 Feb 13 j 04:31	29°♈54'12		
	-955 Jul 12 j 00:53	0°♍			-949 Feb 13 j 07:55	0°♋		
	-955 Aug 29 j 13:17	0°♎			-949 Mar 30 j 04:25	0°♌		
	-955 Oct 23 j 12:28	0°♏			-949 May 15 j 08:41	0°♍		
retrograde	-954 Jan 01 j 23:31	21°♏02'30		evening set	-949 May 19 j 21:03	2°♍54'00		
opposition	-954 Feb 09 j 15:22	12°♏08'40	4°36'45		-949 Jul 01 j 07:34	0°♎		
greatest brilliancy	-954 Feb 10 j 12:34	11°♏48'00	-1.4m					
min. Earth dist.	-954 Feb 14 j 00:03	10°♏26'39	0.64198 AU	conjunction	-949 Jul 06 j 08:55	3°♎13'13	1°04'10	
direct	-954 Mar 22 j 21:27	2°♏08'14		minimum elong	-949 Jul 06 j 08:01	3°♎11'46	1°04'10	
	-954 Jun 11 j 23:48	0°♐		max. Earth dist.	-949 Jul 06 j 07:23	3°♎10'45	2.67323 AU	
desc. node	-954 Jul 10 j 01:40	16°♐40'33			-949 Aug 17 j 07:57	0°♏		
	-954 Jul 30 j 13:19	0°♑		morning rise	-949 Aug 20 j 10:03	1°♏58'41		
	-954 Sep 11 j 02:09	0°♒			-949 Oct 02 j 20:32	0°♐		
	-954 Oct 20 j 18:15	0°♓			-949 Nov 17 j 16:10	0°♑		
	-954 Nov 28 j 04:04	0°♒			-948 Jan 01 j 22:36	0°♒		
	-953 Jan 05 j 12:18	0°♓			-948 Feb 16 j 03:51	0°♓		
evening set	-953 Feb 09 j 16:40	26°♓56'20		desc. node	-948 Feb 29 j 23:56	9°♓04'46		
	-953 Feb 13 j 18:21	0°♈			-948 Apr 02 j 18:52	0°♒		
	-953 Mar 26 j 15:36	0°♋			-948 May 29 j 03:35	0°♓		
				retrograde	-948 Jul 03 j 05:19	7°♓34'14		
conjunction	-953 Apr 11 j 11:45	11°♋14'48	0°-17'-59	min. Earth dist.	-948 Jul 30 j 07:22	3°♓07'34	0.38654 AU	
minimum elong	-953 Apr 11 j 12:50	11°♋16'43	0°17'59	greatest brilliancy	-948 Aug 02 j 20:24	2°♓07'16	-2.8m	
	-953 May 08 j 13:36	0°♌		opposition	-948 Aug 04 j 03:29	1°♓45'09	-6°-43'-30	
asc. node	-953 May 11 j 08:07	1°♌53'14			-948 Aug 10 j 12:34	30°♒♐		
max. Earth dist.	-953 May 15 j 15:09	4°♌47'57	2.54920 AU	direct	-948 Sep 02 j 23:16	26°♐36'29		
morning rise	-953 Jun 05 j 17:21	18°♌55'18			-948 Sep 26 j 10:33	0°♓		
	-953 Jun 22 j 14:04	0°♍			-948 Nov 30 j 03:31	0°♈		
	-953 Aug 08 j 13:56	0°♎		asc. node	-948 Dec 31 j 04:10	18°♈26'03		
	-953 Sep 26 j 17:57	0°♏			-947 Jan 18 j 23:55	0°♋		
	-953 Nov 19 j 01:29	0°♐			-947 Mar 08 j 03:00	0°♌		
retrograde	-952 Feb 14 j 07:56	29°♐23'52			-947 Apr 25 j 02:54	0°♍		
opposition	-952 Mar 21 j 11:23	21°♐42'46	3°02'55		-947 Jun 11 j 23:11	0°♎		
greatest brilliancy	-952 Mar 22 j 17:48	21°♐14'57	-1.8m	evening set	-947 Jun 26 j 09:38	9°♎07'13		
min. Earth dist.	-952 Mar 29 j 05:44	18°♐53'07	0.54609 AU	max. Earth dist.	-947 Jul 28 j 16:42	29°♎43'41	2.65408 AU	
direct	-952 Apr 30 j 03:57	12°♐24'05			-947 Jul 29 j 02:51	0°♏		
desc. node	-952 May 27 j 01:23	16°♐46'27						
	-952 Jun 27 j 11:19	0°♑		conjunction	-947 Aug 11 j 08:52	8°♏33'44	1°08'30	
	-952 Aug 15 j 17:13	0°♒		minimum elong	-947 Aug 11 j 09:20	8°♏34'31	1°08'30	
	-952 Sep 26 j 13:26	0°♓			-947 Sep 13 j 00:38	0°♐		
	-952 Nov 05 j 02:47	0°♒		morning rise	-947 Sep 25 j 12:18	8°♐20'13		
	-952 Dec 14 j 07:59	0°♓			-947 Oct 27 j 09:18	0°♑		
	-951 Jan 23 j 09:33	0°♈			-947 Dec 09 j 05:14	0°♒		
	-951 Mar 06 j 01:15	0°♋		desc. node	-946 Jan 16 j 23:25	27°♌58'05		
asc. node	-951 Mar 28 j 06:10	15°♋27'35			-946 Jan 19 j 18:10	0°♓		
evening set	-951 Apr 05 j 22:48	21°♋24'58			-946 Mar 01 j 11:21	0°♒		
	-951 Apr 18 j 14:33	0°♌			-946 Apr 11 j 05:06	0°♓		
					-946 May 23 j 18:32	0°♈		
conjunction	-951 May 28 j 01:39	26°♌10'01	0°33'59		-946 Jul 12 j 23:49	0°♋		
minimum elong	-951 May 28 j 00:24	26°♌07'57	0°33'58	retrograde	-946 Aug 30 j 14:14	13°♋45'08		
	-951 Jun 02 j 22:44	0°♍		min. Earth dist.	-946 Sep 29 j 08:49	7°♋38'33	0.50090 AU	
max. Earth dist.	-951 Jun 11 j 23:38	5°♍52'00	2.63799 AU	greatest brilliancy	-946 Oct 06 j 07:25	5°♋04'34	-2.1m	
morning rise	-951 Jul 15 j 03:54	27°♍09'50		opposition	-946 Oct 07 j 03:25	4°♋46'00	-2°-4'-35	
	-951 Jul 19 j 14:49	0°♎			-946 Oct 21 j 18:17	30°♒♈		
	-951 Sep 05 j 02:52	0°♏		direct	-946 Nov 10 j 05:35	27°♈25'38		

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 46

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

asc. node	-946 Nov 18 j 03:33	27° Υ 49'40			-941 Dec 26 j 23:56	0° Θ	
	-946 Dec 01 j 01:23	0° Υ					
	-945 Feb 09 j 16:36	0° Υ		conjunction	-940 Jan 09 j 23:13	11° Θ 01'49	-1°-3'-17
	-945 Apr 03 j 20:08	0° Π		minimum elong	-940 Jan 09 j 21:35	10° Θ 58'35	1°03'18
	-945 May 23 j 19:17	0° Θ			-940 Feb 03 j 02:25	0° \approx	
	-945 Jul 10 j 18:01	0° Ω		max. Earth dist.	-940 Feb 05 j 12:18	1° \approx 53'08	2.37601 AU
evening set	-945 Aug 03 j 09:34	15° Ω 17'05			-940 Mar 13 j 00:06	0° Υ	
max. Earth dist.	-945 Aug 24 j 06:16	29° Ω 04'33	2.58283 AU	morning rise	-940 Mar 19 j 11:05	4° Υ 52'39	
	-945 Aug 25 j 15:25	0° \mp			-940 Apr 22 j 12:03	0° Υ	
					-940 Jun 04 j 05:31	0° Υ	
conjunction	-945 Sep 19 j 18:35	17° \mp 03'22	0°44'08	asc. node	-940 Jul 10 j 00:28	23° Υ 44'02	
minimum elong	-945 Sep 19 j 19:59	17° \mp 05'46	0°44'09		-940 Jul 19 j 19:45	0° Π	
	-945 Oct 08 j 09:21	0° $\underline{\Delta}$			-940 Sep 07 j 15:55	0° Θ	
morning rise	-945 Nov 07 j 22:41	21° $\underline{\Delta}$ 49'20			-940 Nov 09 j 04:11	0° Ω	
	-945 Nov 19 j 03:39	0° \mathbb{M}		retrograde	-940 Dec 18 j 09:52	7° Ω 49'58	
desc. node	-945 Dec 04 j 22:19	11° \mathbb{M} 39'47			-939 Jan 23 j 03:12	30° $\mathbb{R}\Theta$	
	-945 Dec 29 j 07:50	0° \mathcal{X}		opposition	-939 Jan 26 j 16:40	28° Θ 36'16	4°41'00
	-944 Feb 06 j 12:12	0° Θ		greatest brilliancy	-939 Jan 27 j 05:42	28° Θ 23'24	-1.3m
	-944 Mar 16 j 11:01	0° \approx		min. Earth dist.	-939 Jan 29 j 13:02	27° Θ 28'47	0.66304 AU
	-944 Apr 25 j 04:11	0° Υ		direct	-939 Mar 08 j 23:19	18° Θ 35'17	
	-944 Jun 06 j 01:32	0° Υ			-939 Apr 26 j 07:50	0° Ω	
	-944 Jul 23 j 00:08	0° Υ			-939 Jun 23 j 01:42	0° \mp	
asc. node	-944 Oct 05 j 02:22	28° Υ 25'35		desc. node	-939 Jul 26 j 19:40	21° \mp 26'54	
retrograde	-944 Oct 10 j 00:29	28° Υ 35'29			-939 Aug 08 j 10:55	0° $\underline{\Delta}$	
min. Earth dist.	-944 Nov 13 j 23:50	20° Υ 33'37	0.61322 AU		-939 Sep 19 j 08:18	0° \mathbb{M}	
opposition	-944 Nov 18 j 18:36	18° Υ 39'08	1°48'59		-939 Oct 28 j 18:09	0° \mathcal{X}	
greatest brilliancy	-944 Nov 18 j 06:49	18° Υ 50'53	-1.5m		-939 Dec 06 j 00:11	0° Θ	
direct	-944 Dec 26 j 14:44	9° Υ 48'22			-938 Jan 13 j 04:42	0° \approx	
	-943 Mar 05 j 15:14	0° Π		evening set	-938 Jan 14 j 05:35	0° \approx 48'29	
	-943 May 01 j 08:29	0° Θ			-938 Feb 21 j 06:21	0° Υ	
	-943 Jun 20 j 10:38	0° Ω					
	-943 Aug 05 j 23:11	0° \mp		conjunction	-938 Mar 19 j 21:40	19° Υ 47'59	0°-40'-8
evening set	-943 Sep 13 j 19:42	26° \mp 37'03		minimum elong	-938 Mar 20 j 00:06	19° Υ 52'26	0°40'08
	-943 Sep 18 j 14:44	0° $\underline{\Delta}$			-938 Apr 02 j 22:57	0° Υ	
max. Earth dist.	-943 Sep 28 j 21:36	7° $\underline{\Delta}$ 19'57	2.46752 AU	max. Earth dist.	-938 May 01 j 12:15	20° Υ 12'07	2.50153 AU
desc. node	-943 Oct 21 j 20:30	24° $\underline{\Delta}$ 02'44			-938 May 15 j 17:16	0° Υ	
	-943 Oct 29 j 21:12	0° \mathbb{M}		morning rise	-938 May 18 j 09:56	1° Υ 50'23	
				asc. node	-938 May 27 j 22:46	8° Υ 18'04	
conjunction	-943 Nov 05 j 20:37	5° \mathbb{M} 13'00	0°-9'-53		-938 Jun 29 j 17:33	0° Π	
minimum elong	-943 Nov 05 j 20:01	5° \mathbb{M} 11'53	0°09'54		-938 Aug 16 j 02:02	0° Θ	
behind sun begin	-943 Nov 05 j 00:53	4° \mathbb{M} 35'59			-938 Oct 05 j 14:06	0° Ω	
behind sun end	-943 Nov 06 j 15:10	5° \mathbb{M} 47'48			-938 Dec 03 j 12:40	0° \mp	
	-943 Dec 08 j 09:23	0° \mathcal{X}		retrograde	-937 Jan 27 j 02:14	13° \mp 41'41	
morning rise	-942 Jan 04 j 18:55	21° \mathcal{X} 18'16		opposition	-937 Mar 05 j 09:59	5° \mp 27'17	3°56'35
	-942 Jan 15 j 21:27	0° Θ		greatest brilliancy	-937 Mar 06 j 16:17	4° \mp 58'37	-1.6m
greatest brilliancy	-942 Feb 23 j 06:43	0° \approx 02'36	1.2m	min. Earth dist.	-937 Mar 11 j 23:25	2° \mp 58'47	0.59063 AU
	-942 Feb 23 j 05:23	0° \approx			-937 Mar 20 j 12:47	30° $\mathbb{R}\Omega$	
	-942 Apr 03 j 06:32	0° Υ		direct	-937 Apr 15 j 01:20	25° Ω 43'01	
	-942 May 13 j 23:17	0° Υ			-937 May 12 j 03:30	0° \mp	
	-942 Jun 26 j 09:25	0° Υ		desc. node	-937 Jun 13 j 17:46	13° \mp 21'03	
	-942 Aug 13 j 13:55	0° Π			-937 Jul 13 j 09:20	0° $\underline{\Delta}$	
asc. node	-942 Aug 23 j 01:47	5° Π 21'20			-937 Aug 27 j 09:09	0° \mathbb{M}	
	-942 Oct 17 j 12:36	0° Θ			-937 Oct 06 j 23:25	0° \mathcal{X}	
retrograde	-942 Nov 14 j 09:47	4° Θ 23'15			-937 Nov 14 j 21:28	0° Θ	
	-942 Dec 10 j 02:55	30° $\mathbb{R}\Pi$			-937 Dec 23 j 15:20	0° \approx	
min. Earth dist.	-942 Dec 23 j 11:15	24° Π 59'25	0.67035 AU		-936 Feb 01 j 06:33	0° Υ	
opposition	-942 Dec 24 j 11:46	24° Π 34'48	3°55'24		-936 Mar 13 j 12:43	0° Υ	
greatest brilliancy	-942 Dec 24 j 05:35	24° Π 41'00	-1.3m	evening set	-936 Mar 16 j 21:55	2° Υ 23'59	
direct	-941 Feb 02 j 17:20	14° Π 54'52		asc. node	-936 Apr 13 j 22:28	21° Υ 56'05	
	-941 Apr 01 j 16:49	0° Θ			-936 Apr 25 j 18:03	0° Υ	
	-941 May 29 j 13:27	0° Ω					
	-941 Jul 17 j 03:29	0° \mp		conjunction	-936 May 10 j 23:08	10° Υ 14'36	0°15'54
	-941 Aug 30 j 08:14	0° $\underline{\Delta}$		minimum elong	-936 May 10 j 22:23	10° Υ 13'21	0°15'55
desc. node	-941 Sep 08 j 20:15	6° $\underline{\Delta}$ 45'06		max. Earth dist.	-936 Jun 01 j 21:46	24° Υ 46'40	2.60919 AU
	-941 Oct 10 j 13:36	0° \mathbb{M}			-936 Jun 09 j 21:20	0° Π	
evening set	-941 Nov 06 j 23:10	20° \mathbb{M} 49'56		morning rise	-936 Jun 30 j 06:47	13° Π 12'36	
	-941 Nov 18 j 19:11	0° \mathcal{X}			-936 Jul 26 j 14:01	0° Θ	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 47

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-936 Sep 12 j 12:33	0°♈			-931 Dec 28 j 14:59	0°♑		
	-936 Oct 31 j 23:46	0°♐			-930 Feb 20 j 20:56	0°♏		
	-936 Dec 24 j 05:36	0°♏			-930 Apr 12 j 05:20	0°♐		
retrograde	-935 Mar 19 j 13:58	28°♏47'14			-930 May 31 j 03:12	0°♑		
opposition	-935 Apr 22 j 07:50	22°♏14'18	0°28'34		-930 Jul 17 j 16:26	0°♈		
greatest brilliancy	-935 Apr 22 j 14:23	22°♏08'53	-2.3m	evening set	-930 Jul 19 j 09:25	1°♏05'47		
desc. node	-935 Apr 30 j 16:34	19°♏28'43		max. Earth dist.	-930 Aug 13 j 06:15	17°♏14'27	2.61660 AU	
min. Earth dist.	-935 Apr 30 j 19:19	19°♏26'30	0.46629 AU		-930 Sep 01 j 12:46	0°♐		
direct	-935 May 29 j 07:59	14°♏14'11						
	-935 Jul 21 j 06:34	0°♍		conjunction	-930 Sep 03 j 19:43	1°♐31'52	0°57'13	
	-935 Sep 08 j 02:00	0°♌		minimum elong	-930 Sep 03 j 20:55	1°♐33'54	0°57'12	
	-935 Oct 20 j 02:09	0°♋			-930 Oct 15 j 11:06	0°♏		
	-935 Nov 29 j 18:14	0°♊		morning rise	-930 Oct 20 j 19:42	3°♏44'59		
	-934 Jan 09 j 21:34	0°♑			-930 Nov 26 j 13:35	0°♍		
	-934 Feb 21 j 09:46	0°♑		desc. node	-930 Dec 21 j 14:42	18°♍23'52		
asc. node	-934 Mar 01 j 21:33	5°♑51'17			-929 Jan 06 j 03:56	0°♌		
	-934 Apr 06 j 14:41	0°♏			-929 Feb 14 j 19:00	0°♋		
evening set	-934 May 03 j 17:19	17°♏52'45			-929 Mar 26 j 04:57	0°♊		
	-934 May 22 j 08:49	0°♐			-929 May 05 j 12:32	0°♑		
					-929 Jun 17 j 16:33	0°♑		
conjunction	-934 Jun 21 j 14:54	19°♐27'13	0°55'24		-929 Aug 08 j 20:33	0°♏		
minimum elong	-934 Jun 21 j 13:38	19°♐25'12	0°55'23	retrograde	-929 Sep 26 j 00:45	12°♏55'57		
max. Earth dist.	-934 Jun 27 j 02:39	22°♐57'51	2.66578 AU	asc. node	-929 Oct 22 j 18:26	7°♏56'01		
	-934 Jul 08 j 03:11	0°♑		min. Earth dist.	-929 Oct 29 j 02:27	5°♏34'56	0.57463 AU	
morning rise	-934 Aug 06 j 11:36	18°♑41'25		opposition	-929 Nov 04 j 05:59	3°♏10'07	0°33'12	
	-934 Aug 24 j 06:00	0°♈		greatest brilliancy	-929 Nov 04 j 00:59	3°♏15'01	-1.7m	
	-934 Oct 10 j 06:03	0°♐			-929 Nov 12 j 16:55	30°♑		
	-934 Nov 26 j 02:26	0°♏		direct	-929 Dec 10 j 18:37	24°♑48'38		
	-933 Jan 12 j 07:44	0°♍			-928 Jan 10 j 18:35	0°♏		
	-933 Mar 02 j 12:15	0°♌			-928 Mar 17 j 21:20	0°♐		
desc. node	-933 Mar 18 j 16:37	9°♌11'21			-928 May 09 j 20:00	0°♑		
	-933 May 02 j 04:17	0°♋			-928 Jun 27 j 20:34	0°♈		
retrograde	-933 Jun 03 j 22:03	6°♋11'18			-928 Aug 13 j 01:30	0°♐		
opposition	-933 Jul 04 j 02:50	1°♋10'52	-6°-16'-5	evening set	-928 Aug 27 j 08:41	9°♐38'46		
greatest brilliancy	-933 Jul 04 j 04:18	1°♋09'54	-2.9m	max. Earth dist.	-928 Sep 12 j 08:28	20°♐38'25	2.51676 AU	
min. Earth dist.	-933 Jul 04 j 09:25	1°♋06'31	0.37532 AU		-928 Sep 25 j 17:05	0°♏		
	-933 Jul 08 j 14:59	30°♑						
direct	-933 Aug 03 j 03:11	26°♌10'15		conjunction	-928 Oct 16 j 12:04	14°♏52'30	0°14'13	
	-933 Aug 27 j 19:19	0°♋		minimum elong	-928 Oct 16 j 12:46	14°♏53'46	0°14'13	
	-933 Oct 28 j 09:29	0°♊		behind sun begin	-928 Oct 16 j 01:54	14°♏34'05		
	-933 Dec 14 j 22:20	0°♑		behind sun end	-928 Oct 16 j 23:39	15°♏13'28		
asc. node	-932 Jan 17 j 19:36	22°♑04'52			-928 Nov 06 j 03:21	0°♍		
	-932 Jan 29 j 23:16	0°♑		desc. node	-928 Nov 07 j 14:07	1°♍04'29		
	-932 Mar 16 j 09:01	0°♏		morning rise	-928 Dec 10 j 06:05	25°♍42'11		
	-932 May 02 j 11:21	0°♐			-928 Dec 15 j 20:41	0°♌		
evening set	-932 Jun 11 j 17:19	25°♐28'12			-927 Jan 23 j 13:42	0°♋		
	-932 Jun 18 j 20:59	0°♑			-927 Mar 03 j 01:44	0°♊		
max. Earth dist.	-932 Jul 19 j 12:52	19°♑30'08	2.66789 AU		-927 Apr 11 j 06:31	0°♑		
					-927 May 22 j 05:10	0°♑		
conjunction	-932 Jul 27 j 23:16	24°♑53'56	1°10'02		-927 Jul 05 j 08:18	0°♏		
minimum elong	-932 Jul 27 j 23:11	24°♑53'47	1°10'02		-927 Aug 25 j 08:39	0°♐		
	-932 Aug 04 j 21:53	0°♈		asc. node	-927 Sep 08 j 16:31	6°♐59'16		
morning rise	-932 Sep 10 j 16:54	23°♈53'34		retrograde	-927 Oct 31 j 23:31	21°♐14'21		
	-932 Sep 19 j 23:42	0°♐		min. Earth dist.	-927 Dec 08 j 13:53	12°♐19'25	0.65553 AU	
	-932 Nov 03 j 19:00	0°♏		opposition	-927 Dec 11 j 02:20	11°♐18'41	3°16'57	
	-932 Dec 17 j 08:06	0°♍		greatest brilliancy	-927 Dec 10 j 15:20	11°♐29'43	-1.3m	
	-931 Jan 28 j 20:09	0°♌		direct	-926 Jan 19 j 13:28	1°♐54'23		
desc. node	-931 Feb 02 j 15:29	3°♌25'32			-926 Apr 14 j 21:07	0°♑		
	-931 Mar 11 j 19:12	0°♋			-926 Jun 07 j 06:23	0°♈		
	-931 Apr 23 j 09:19	0°♊			-926 Jul 24 j 19:19	0°♐		
	-931 Jun 09 j 08:37	0°♑			-926 Sep 06 j 17:14	0°♏		
retrograde	-931 Aug 10 j 19:30	21°♑24'33		desc. node	-926 Sep 25 j 12:49	13°♏29'13		
min. Earth dist.	-931 Sep 07 j 11:45	16°♑10'45	0.44969 AU	evening set	-926 Oct 14 j 20:07	27°♏41'26		
greatest brilliancy	-931 Sep 14 j 00:35	13°♑57'16	-2.4m		-926 Oct 17 j 22:24	0°♍		
opposition	-931 Sep 15 j 12:58	13°♑26'00	-4°-6'-44	max. Earth dist.	-926 Nov 10 j 05:55	17°♍39'17	2.39253 AU	
direct	-931 Oct 17 j 20:49	6°♑57'09			-926 Nov 26 j 06:00	0°♌		
asc. node	-931 Dec 04 j 18:56	18°♑49'39						

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 48

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

conjunction	-926 Dec 13 j 06:51	13° ♊ 17'21	0°-47'-54	opposition	-920 Apr 01 j 04:23	2° ♋ 18'04	2°17'38
minimum elong	-926 Dec 13 j 04:04	13° ♊ 11'55	0°47'54	greatest brilliancy	-920 Apr 02 j 06:23	1° ♋ 54'57	-2.0m
	-925 Jan 03 j 12:50	0° ♋			-920 Apr 07 j 15:46	30° ♋	
	-925 Feb 10 j 16:29	0° ♋		min. Earth dist.	-920 Apr 09 j 10:47	29° ♋ 22'36	0.51876 AU
morning rise	-925 Feb 19 j 07:52	6° ♋ 44'21		direct	-920 May 10 j 03:11	23° ♋ 21'14	
	-925 Mar 21 j 14:07	0° ♋		desc. node	-920 May 17 j 08:58	23° ♋ 42'07	
	-925 May 01 j 01:45	0° ♋			-920 Jun 12 j 10:34	0° ♋	
	-925 Jun 12 j 21:51	0° ♋			-920 Aug 07 j 22:55	0° ♋	
asc. node	-925 Jul 27 j 15:30	29° ♋ 07'14			-920 Sep 20 j 04:31	0° ♋	
	-925 Jul 29 j 01:28	0° ♋			-920 Oct 30 j 08:11	0° ♋	
	-925 Sep 19 j 05:55	0° ♋			-920 Dec 08 j 22:25	0° ♋	
retrograde	-925 Dec 05 j 13:53	25° ♋ 01'21			-919 Jan 18 j 06:38	0° ♋	
opposition	-924 Jan 14 j 07:17	15° ♋ 31'25	4°32'35		-919 Mar 01 j 03:34	0° ♋	
greatest brilliancy	-924 Jan 14 j 12:07	15° ♋ 26'37	-1.2m	asc. node	-919 Mar 18 j 12:48	12° ♋ 04'58	
min. Earth dist.	-924 Jan 15 j 15:12	14° ♋ 59'38	0.67373 AU		-919 Apr 13 j 20:55	0° ♋	
direct	-924 Feb 24 j 08:20	5° ♋ 35'18		evening set	-919 Apr 16 j 10:46	1° ♋ 43'49	
	-924 May 11 j 06:07	0° ♋			-919 May 29 j 07:29	0° ♋	
	-924 Jul 02 j 10:00	0° ♋					
desc. node	-924 Aug 12 j 11:25	27° ♋ 06'51		conjunction	-919 Jun 06 j 06:10	5° ♋ 09'08	0°42'53
	-924 Aug 16 j 15:16	0° ♋		minimum elong	-919 Jun 06 j 04:49	5° ♋ 06'56	0°42'53
	-924 Sep 27 j 04:07	0° ♋		max. Earth dist.	-919 Jun 17 j 15:24	12° ♋ 30'00	2.65018 AU
	-924 Nov 05 j 11:10	0° ♋			-919 Jul 14 j 23:31	0° ♋	
	-924 Dec 13 j 15:48	0° ♋		morning rise	-919 Jul 23 j 09:46	5° ♋ 21'47	
evening set	-924 Dec 17 j 08:07	2° ♋ 54'19			-919 Aug 31 j 07:18	0° ♋	
	-923 Jan 20 j 18:39	0° ♋			-919 Oct 17 j 23:33	0° ♋	
					-919 Dec 05 j 08:39	0° ♋	
conjunction	-923 Feb 22 j 04:46	25° ♋ 02'10	0°-58'-15		-918 Jan 25 j 02:10	0° ♋	
minimum elong	-923 Feb 22 j 07:17	25° ♋ 06'56	0°58'15		-918 Mar 28 j 13:38	0° ♋	
	-923 Feb 28 j 17:41	0° ♋		desc. node	-918 Apr 04 j 08:00	2° ♋ 10'10	
	-923 Apr 10 j 07:04	0° ♋		retrograde	-918 May 02 j 13:32	6° ♋ 40'11	
max. Earth dist.	-923 Apr 12 j 16:32	1° ♋ 43'34	2.44886 AU	opposition	-918 Jun 02 j 12:54	1° ♋ 23'22	-3°-46'-49
morning rise	-923 Apr 27 j 13:22	12° ♋ 19'52		greatest brilliancy	-918 Jun 03 j 10:45	1° ♋ 07'52	-2.7m
	-923 May 22 j 23:11	0° ♋			-918 Jun 07 j 10:47	30° ♋	
asc. node	-923 Jun 13 j 15:35	14° ♋ 38'16		min. Earth dist.	-918 Jun 07 j 17:18	29° ♋ 55'27	0.39542 AU
	-923 Jul 07 j 01:24	0° ♋		direct	-918 Jul 05 j 00:05	25° ♋ 26'33	
	-923 Aug 23 j 23:57	0° ♋			-918 Jul 31 j 14:30	0° ♋	
	-923 Oct 15 j 17:25	0° ♋			-918 Sep 28 j 02:13	0° ♋	
retrograde	-922 Jan 10 j 17:19	29° ♋ 19'20			-918 Nov 12 j 05:48	0° ♋	
opposition	-922 Feb 17 j 23:26	20° ♋ 37'59	4°27'03		-918 Dec 25 j 19:51	0° ♋	
greatest brilliancy	-922 Feb 19 j 00:31	20° ♋ 13'43	-1.4m	asc. node	-917 Feb 03 j 11:48	27° ♋ 01'03	
min. Earth dist.	-922 Feb 23 j 03:22	18° ♋ 38'22	0.62640 AU		-917 Feb 07 j 22:11	0° ♋	
direct	-922 Mar 31 j 03:02	10° ♋ 40'45			-917 Mar 25 j 05:03	0° ♋	
	-922 Jun 03 j 09:25	0° ♋			-917 May 10 j 15:31	0° ♋	
desc. node	-922 Jun 30 j 10:19	14° ♋ 57'22		evening set	-917 May 28 j 16:53	11° ♋ 31'54	
	-922 Jul 24 j 10:33	0° ♋			-917 Jun 26 j 17:23	0° ♋	
	-922 Sep 05 j 15:31	0° ♋		max. Earth dist.	-917 Jul 11 j 14:03	9° ♋ 27'23	2.67372 AU
	-922 Oct 15 j 14:00	0° ♋					
	-922 Nov 23 j 03:07	0° ♋		conjunction	-917 Jul 14 j 14:58	11° ♋ 23'32	1°07'27
	-922 Dec 31 j 13:48	0° ♋		minimum elong	-917 Jul 14 j 14:21	11° ♋ 22'32	1°07'28
	-921 Feb 08 j 21:59	0° ♋			-917 Aug 12 j 17:40	0° ♋	
evening set	-921 Feb 23 j 12:54	10° ♋ 51'52		morning rise	-917 Aug 28 j 10:15	10° ♋ 05'47	
	-921 Mar 21 j 21:15	0° ♋			-917 Sep 28 j 01:57	0° ♋	
					-917 Nov 12 j 11:53	0° ♋	
conjunction	-921 Apr 23 j 03:31	22° ♋ 39'07	0°-5'-7		-917 Dec 27 j 00:49	0° ♋	
minimum elong	-921 Apr 23 j 03:48	22° ♋ 39'35	0°05'08		-916 Feb 09 j 00:09	0° ♋	
behind sun begin	-921 Apr 22 j 05:35	22° ♋ 01'19		desc. node	-916 Feb 20 j 08:56	7° ♋ 45'49	
behind sun end	-921 Apr 24 j 02:00	23° ♋ 17'50			-916 Mar 24 j 05:20	0° ♋	
asc. node	-921 May 01 j 14:11	28° ♋ 26'49			-916 May 10 j 11:47	0° ♋	
	-921 May 03 j 20:48	0° ♋		retrograde	-916 Jul 18 j 12:13	24° ♋ 52'39	
max. Earth dist.	-921 May 22 j 18:32	12° ♋ 45'32	2.57273 AU	min. Earth dist.	-916 Aug 14 j 01:07	20° ♋ 20'22	0.40449 AU
morning rise	-921 Jun 15 j 09:26	28° ♋ 22'37		greatest brilliancy	-916 Aug 19 j 03:13	18° ♋ 48'07	-2.7m
	-921 Jun 17 j 21:04	0° ♋		opposition	-916 Aug 20 j 19:27	18° ♋ 17'30	-6°-2'-48
	-921 Aug 03 j 16:50	0° ♋		direct	-916 Sep 20 j 06:57	12° ♋ 44'19	
	-921 Sep 21 j 07:14	0° ♋			-916 Nov 18 j 05:58	0° ♋	
	-921 Nov 11 j 18:24	0° ♋		asc. node	-916 Dec 21 j 10:13	17° ♋ 37'06	
	-920 Jan 12 j 12:37	0° ♋			-915 Jan 11 j 18:49	0° ♋	
retrograde	-920 Feb 25 j 18:29	9° ♋ 37'27			-915 Mar 02 j 09:47	0° ♋	

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 49

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

	-915 Apr 20 j 01:53	0°♊			-910 Feb 18 j 07:18	0°♊	
	-915 Jun 07 j 06:00	0°♋			-910 Mar 29 j 06:26	0°♋	
evening set	-915 Jul 04 j 17:57	17°♋21'19			-910 May 08 j 19:56	0°♌	
	-915 Jul 24 j 12:50	0°♍			-910 Jun 20 j 22:34	0°♍	
max. Earth dist.	-915 Aug 03 j 06:07	6°♍16'15	2.64306 AU		-910 Aug 07 j 02:14	0°♎	
				asc. node	-910 Aug 13 j 08:06	3°♎41'32	
conjunction	-915 Aug 19 j 17:38	17°♎00'00	1°05'38		-910 Oct 03 j 07:16	0°♏	
minimum elong	-915 Aug 19 j 18:26	17°♎01'17	1°05'38	retrograde	-910 Nov 22 j 02:09	12°♏15'06	
	-915 Sep 08 j 10:08	0°♐		opposition	-909 Jan 01 j 02:27	2°♏32'21	4°12'26
morning rise	-915 Oct 04 j 08:14	17°♐26'49		greatest brilliancy	-910 Dec 31 j 23:47	2°♏35'01	-1.2m
	-915 Oct 22 j 15:15	0°♑		min. Earth dist.	-910 Dec 31 j 21:53	2°♏36'56	0.67430 AU
	-915 Dec 04 j 04:47	0°♒			-909 Jan 07 j 12:51	30°♒♊	
desc. node	-914 Jan 07 j 07:57	24°♒48'27		direct	-909 Feb 10 j 16:38	22°♒45'40	
	-914 Jan 14 j 09:01	0°♓			-909 Mar 20 j 13:22	0°♓	
	-914 Feb 23 j 15:13	0°♔			-909 May 23 j 06:31	0°♔	
	-914 Apr 04 j 18:24	0°♕			-909 Jul 11 j 21:10	0°♕	
	-914 May 16 j 04:04	0°♖			-909 Aug 25 j 10:13	0°♖	
	-914 Jul 01 j 05:20	0°♗		desc. node	-909 Aug 30 j 04:29	3°♖21'23	
retrograde	-914 Sep 09 j 17:05	25°♗21'18			-909 Oct 05 j 18:33	0°♘	
min. Earth dist.	-914 Oct 10 j 16:30	18°♗47'07	0.52840 AU		-909 Nov 14 j 00:55	0°♘	
opposition	-914 Oct 18 j 00:14	15°♗59'58	-1°-1'-18	evening set	-909 Nov 21 j 04:50	5°♘35'16	
greatest brilliancy	-914 Oct 17 j 14:26	16°♗09'18	-2.0m		-909 Dec 22 j 05:24	0°♙	
asc. node	-914 Nov 08 j 09:10	9°♗31'14					
direct	-914 Nov 22 j 00:08	8°♗15'30		conjunction	-908 Jan 26 j 02:02	27°♙28'28	-1°-5'-43
	-913 Jan 31 j 23:04	0°♚		minimum elong	-908 Jan 26 j 02:06	27°♙28'36	1°05'44
	-913 Mar 28 j 21:13	0°♛			-908 Jan 29 j 07:27	0°♛	
	-913 May 18 j 17:15	0°♜			-908 Mar 08 j 04:46	0°♜	
	-913 Jul 06 j 00:30	0°♝		max. Earth dist.	-908 Mar 13 j 06:20	3°♜49'55	2.39696 AU
evening set	-913 Aug 12 j 05:45	24°♝09'08		morning rise	-908 Apr 03 j 13:11	19°♜41'49	
	-913 Aug 21 j 00:40	0°♞			-908 Apr 17 j 15:57	0°♞	
max. Earth dist.	-913 Aug 31 j 01:00	6°♞44'12	2.56106 AU		-908 May 30 j 07:28	0°♟	
				asc. node	-908 Jun 30 j 06:38	20°♟42'44	
conjunction	-913 Sep 29 j 09:15	26°♞56'05	0°34'29		-908 Jul 14 j 14:58	0°♠	
minimum elong	-913 Sep 29 j 10:33	26°♞58'22	0°34'28		-908 Sep 01 j 12:52	0°♓	
	-913 Oct 03 j 18:03	0°♑			-908 Oct 28 j 13:29	0°♔	
	-913 Nov 14 j 09:41	0°♒		retrograde	-908 Dec 26 j 15:34	15°♔48'19	
morning rise	-913 Nov 19 j 04:40	3°♒32'08		opposition	-907 Feb 03 j 14:52	6°♔45'01	4°39'58
desc. node	-913 Nov 25 j 06:15	8°♒02'10		greatest brilliancy	-907 Feb 04 j 08:26	6°♔27'47	-1.3m
	-913 Dec 24 j 10:06	0°♓		min. Earth dist.	-907 Feb 07 j 07:18	5°♔18'20	0.65264 AU
	-912 Feb 01 j 10:09	0°♔			-907 Feb 22 j 11:56	30°♔♕	
	-912 Mar 11 j 04:34	0°♕		direct	-907 Mar 16 j 22:21	26°♕43'43	
	-912 Apr 19 j 15:55	0°♖			-907 Apr 10 j 01:22	0°♕	
	-912 May 31 j 01:40	0°♗			-907 Jun 16 j 06:21	0°♖	
	-912 Jul 15 j 12:57	0°♘		desc. node	-907 Jul 17 j 02:33	18°♖54'35	
	-912 Sep 12 j 02:45	0°♙			-907 Aug 02 j 20:34	0°♖	
asc. node	-912 Sep 25 j 09:11	4°♙12'44			-907 Sep 14 j 03:34	0°♗	
retrograde	-912 Oct 18 j 04:14	7°♙23'25			-907 Oct 23 j 17:37	0°♘	
	-912 Nov 20 j 16:16	30°♙♚			-907 Dec 01 j 01:50	0°♙	
min. Earth dist.	-912 Nov 23 j 03:14	29°♙01'43	0.63072 AU		-906 Jan 08 j 08:04	0°♛	
opposition	-912 Nov 27 j 03:14	27°♙25'35	2°25'33	evening set	-906 Jan 29 j 10:17	16°♛17'39	
greatest brilliancy	-912 Nov 26 j 14:23	27°♙38'26	-1.5m		-906 Feb 16 j 11:18	0°♜	
direct	-911 Jan 04 j 15:03	18°♙21'32			-906 Mar 29 j 05:07	0°♞	
	-911 Feb 23 j 05:46	0°♛					
	-911 Apr 25 j 06:10	0°♜		conjunction	-906 Apr 02 j 00:58	2°♞44'42	0°-27'-38
	-911 Jun 15 j 07:38	0°♝		minimum elong	-906 Apr 02 j 02:41	2°♞47'47	0°27'38
	-911 Aug 01 j 04:27	0°♞		max. Earth dist.	-906 May 10 j 00:26	29°♞19'31	2.52858 AU
	-911 Sep 13 j 22:35	0°♑			-906 May 11 j 00:06	0°♟	
evening set	-911 Sep 24 j 10:40	7°♑29'05		asc. node	-906 May 18 j 06:33	4°♟57'04	
max. Earth dist.	-911 Oct 10 j 09:13	19°♑02'42	2.43956 AU	morning rise	-906 May 29 j 01:53	12°♟14'13	
desc. node	-911 Oct 12 j 05:12	20°♑23'23			-906 Jun 24 j 22:51	0°♠	
	-911 Oct 25 j 04:51	0°♒			-906 Aug 11 j 00:48	0°♓	
					-906 Sep 29 j 15:33	0°♔	
conjunction	-911 Nov 18 j 12:11	18°♒21'37	0°-24'-18		-906 Nov 23 j 16:27	0°♕	
minimum elong	-911 Nov 18 j 10:38	18°♒18'39	0°24'19	retrograde	-905 Feb 06 j 03:57	22°♕53'05	
	-911 Dec 03 j 15:29	0°♓		opposition	-905 Mar 14 j 21:19	14°♕56'06	3°28'39
	-910 Jan 11 j 01:23	0°♔		greatest brilliancy	-905 Mar 16 j 04:23	14°♕27'14	-1.7m
morning rise	-910 Jan 20 j 15:07	7°♔31'22		min. Earth dist.	-905 Mar 22 j 04:12	12°♕14'13	0.56695 AU

Planetary Phenomena of Mars from -1400 through -900 (UT), Astrodienst AG 7-Dez-2017 14:45, page 50

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

direct	-905 Apr 24 j 02:05	5°♎24'08		-900 Jul 31 j 08:10	0°♎	
desc. node	-905 Jun 04 j 01:54	14°♎44'09				
	-905 Jul 04 j 23:03	0°♊	conjunction	-900 Aug 05 j 04:59	3°♎08'06	1°09'38
	-905 Aug 20 j 23:22	0°♌	minimum elong	-900 Aug 05 j 05:14	3°♎08'30	1°09'38
	-905 Oct 01 j 05:28	0°♍		-900 Sep 15 j 08:15	0°♎	
	-905 Nov 09 j 11:17	0°♎	morning rise	-900 Sep 19 j 02:16	2°♎29'09	
	-905 Dec 18 j 10:35	0°♏		-900 Oct 29 j 22:15	0°♊	
	-904 Jan 27 j 06:26	0°♋		-900 Dec 12 j 01:54	0°♌	
	-904 Mar 08 j 16:29	0°♍				
evening set	-904 Mar 28 j 13:32	13°♍55'23				
asc. node	-904 Apr 04 j 04:52	18°♍30'33				
	-904 Apr 21 j 01:01	0°♋				
conjunction	-904 May 20 j 21:31	19°♋56'14	0°26'44			
minimum elong	-904 May 20 j 20:24	19°♋54'24	0°26'45			
	-904 Jun 05 j 05:48	0°♌				
max. Earth dist.	-904 Jun 07 j 21:23	1°♌43'32	2.62616 AU			
morning rise	-904 Jul 08 j 21:26	21°♌43'04				
	-904 Jul 21 j 21:16	0°♍				
	-904 Sep 07 j 13:00	0°♎				
	-904 Oct 26 j 05:10	0°♎				
	-904 Dec 16 j 02:46	0°♊				
	-903 Feb 13 j 17:10	0°♌				
retrograde	-903 Apr 03 j 05:22	11°♌28'42				
desc. node	-903 Apr 21 j 01:43	9°♌29'27				
opposition	-903 May 05 j 20:56	5°♌24'01	0°-53'-37			
greatest brilliancy	-903 May 06 j 06:53	5°♌16'11	-2.5m			
min. Earth dist.	-903 May 13 j 19:37	2°♌54'04	0.43811 AU			
	-903 May 24 j 14:04	30°♌♊				
direct	-903 Jun 10 j 11:40	28°♊04'17				
	-903 Jun 27 j 08:33	0°♌				
	-903 Aug 29 j 18:54	0°♍				
	-903 Oct 12 j 22:18	0°♎				
	-903 Nov 23 j 13:26	0°♏				
	-902 Jan 04 j 07:21	0°♋				
	-902 Feb 16 j 05:32	0°♍				
asc. node	-902 Feb 20 j 02:46	2°♍39'46				
	-902 Apr 01 j 17:41	0°♋				
evening set	-902 May 13 j 02:15	27°♋02'15				
	-902 May 17 j 16:23	0°♌				
conjunction	-902 Jun 30 j 03:23	27°♌50'13	1°00'57			
minimum elong	-902 Jun 30 j 02:18	27°♌48'30	1°00'58			
max. Earth dist.	-902 Jul 02 j 11:22	29°♌19'28	2.67103 AU			
	-902 Jul 03 j 12:47	0°♍				
morning rise	-902 Aug 14 j 11:35	26°♍44'21				
	-902 Aug 19 j 14:08	0°♎				
	-902 Oct 05 j 07:35	0°♎				
	-902 Nov 20 j 13:35	0°♊				
	-901 Jan 05 j 14:10	0°♌				
	-901 Feb 21 j 04:09	0°♍				
desc. node	-901 Mar 09 j 00:55	9°♍55'44				
	-901 Apr 12 j 00:45	0°♎				
retrograde	-901 Jun 21 j 09:40	24°♎17'00				
min. Earth dist.	-901 Jul 19 j 14:48	19°♎41'50	0.37767 AU			
opposition	-901 Jul 22 j 08:17	18°♎57'21	-6°-49'-36			
greatest brilliancy	-901 Jul 21 j 14:36	19°♎09'23	-2.8m			
direct	-901 Aug 21 j 00:33	13°♎59'45				
	-901 Oct 15 j 01:25	0°♏				
	-901 Dec 06 j 23:49	0°♋				
asc. node	-900 Jan 08 j 02:18	20°♋03'05				
	-900 Jan 23 j 18:59	0°♍				
	-900 Mar 11 j 01:02	0°♋				
	-900 Apr 27 j 14:05	0°♌				
	-900 Jun 14 j 05:21	0°♍				
evening set	-900 Jun 20 j 04:14	3°♍45'50				
max. Earth dist.	-900 Jul 24 j 22:01	25°♍52'34	2.66134 AU			

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 1

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

conjunction	-900 Aug 05 j 04:59	3°08'06	1°09'38		-895 May 16 j 21:17	0°Υ	
minimum elong	-900 Aug 05 j 05:14	3°08'30	1°09'38		-895 Jun 29 j 11:37	0°Ϸ	
	-900 Sep 15 j 08:15	0°ϯ			-895 Aug 17 j 11:13	0°Π	
morning rise	-900 Sep 19 j 02:16	2°ϯ29'09		asc. node	-895 Aug 29 j 23:38	6°Π44'53	
	-900 Oct 29 j 22:15	0°Δ		retrograde	-895 Nov 08 j 16:50	29°Π18'00	
	-900 Dec 12 j 01:54	0°ϯ		min. Earth dist.	-895 Dec 17 j 03:27	20°Π06'48	0.66494 AU
desc. node	-899 Jan 23 j 23:57	0°Ϸ41'57		opposition	-895 Dec 18 j 20:17	19°Π25'47	3°40'54
	-899 Jan 23 j 00:45	0°Ϸ		greatest brilliancy	-895 Dec 18 j 11:36	19°Π34'31	-1.3m
	-899 Mar 05 j 05:28	0°Ϸ		direct	-894 Jan 27 j 18:54	9°Π52'22	
	-899 Apr 15 j 14:42	0°≈			-894 Apr 06 j 21:21	0°Ϸ	
	-899 May 29 j 10:05	0°Ϸ			-894 Jun 01 j 14:54	0°Ω	
	-899 Jul 25 j 22:53	0°Υ			-894 Jul 19 j 18:58	0°ϯ	
retrograde	-899 Aug 22 j 09:03	4°Υ57'27			-894 Sep 01 j 22:07	0°Δ	
	-899 Sep 17 j 23:46	30°Ϸ		desc. node	-894 Sep 15 j 20:37	9°Δ56'07	
min. Earth dist.	-899 Sep 20 j 04:58	29°Ϸ14'26	0.47785 AU		-894 Oct 13 j 04:26	0°ϯ	
greatest brilliancy	-899 Sep 27 j 01:32	26°Ϸ46'52	-2.2m	evening set	-894 Oct 27 j 13:59	10°ϯ51'09	
opposition	-899 Sep 28 j 05:19	26°Ϸ21'48	-2°-55'-40		-894 Nov 21 j 11:40	0°Ϸ	
direct	-899 Oct 31 j 12:10	19°Ϸ23'23		max. Earth dist.	-894 Dec 15 j 05:59	18°Ϸ35'24	2.37477 AU
asc. node	-899 Nov 25 j 01:58	22°Ϸ55'37					
	-899 Dec 15 j 19:39	0°Υ		conjunction	-894 Dec 28 j 15:44	29°Ϸ09'11	0°-58'-9
	-898 Feb 13 j 23:29	0°Ϸ		minimum elong	-894 Dec 28 j 13:13	29°Ϸ04'13	0°58'10
	-898 Apr 06 j 18:00	0°Π			-894 Dec 29 j 17:30	0°Ϸ	
	-898 May 26 j 05:39	0°Ϸ			-893 Feb 05 j 20:10	0°≈	
	-898 Jul 13 j 00:48	0°Ω		morning rise	-893 Mar 08 j 01:26	23°≈24'22	
evening set	-898 Jul 27 j 22:23	9°Ω35'45			-893 Mar 16 j 17:07	0°Ϸ	
max. Earth dist.	-898 Aug 19 j 11:14	24°Ω21'43	2.59894 AU		-893 Apr 26 j 03:36	0°Υ	
	-898 Aug 27 j 22:36	0°ϯ			-893 Jun 07 j 20:26	0°Ϸ	
				asc. node	-893 Jul 17 j 22:42	26°Ϸ26'19	
conjunction	-898 Sep 12 j 19:13	10°ϯ41'01	0°50'13		-893 Jul 23 j 13:35	0°Π	
minimum elong	-898 Sep 12 j 20:34	10°ϯ43'18	0°50'12		-893 Sep 12 j 02:36	0°Ϸ	
	-898 Oct 10 j 19:36	0°Δ			-893 Nov 21 j 02:07	0°Ω	
morning rise	-898 Oct 30 j 21:06	14°Δ11'19		retrograde	-893 Dec 13 j 10:25	2°Ω48'31	
	-898 Nov 21 j 18:20	0°ϯ			-892 Jan 03 j 05:04	30°Ϸ	
desc. node	-898 Dec 11 j 23:03	14°ϯ52'48		opposition	-892 Jan 21 j 22:56	23°Ϸ27'01	4°38'46
	-897 Jan 01 j 03:37	0°Ϸ		greatest brilliancy	-892 Jan 22 j 08:14	23°Ϸ17'49	-1.2m
	-897 Feb 09 j 12:38	0°Ϸ		min. Earth dist.	-892 Jan 24 j 02:55	22°Ϸ35'32	0.66915 AU
	-897 Mar 20 j 15:42	0°≈		direct	-892 Mar 03 j 04:23	13°Ϸ27'42	
	-897 Apr 29 j 13:29	0°Ϸ			-892 May 02 j 12:33	0°Ω	
	-897 Jun 10 j 19:36	0°Υ			-892 Jun 26 j 12:11	0°ϯ	
	-897 Jul 29 j 03:37	0°Ϸ		desc. node	-892 Aug 02 j 20:17	24°ϯ07'53	
retrograde	-897 Oct 04 j 17:40	22°Ϸ31'13			-892 Aug 11 j 10:15	0°Δ	
asc. node	-897 Oct 13 j 00:29	22°Ϸ01'56			-892 Sep 22 j 04:51	0°ϯ	
min. Earth dist.	-897 Nov 07 j 21:15	14°Ϸ47'20	0.59699 AU		-892 Oct 31 j 14:08	0°Ϸ	
opposition	-897 Nov 13 j 07:33	12°Ϸ38'13	1°19'21		-892 Dec 08 j 19:29	0°Ϸ	
greatest brilliancy	-897 Nov 12 j 21:34	12°Ϸ48'06	-1.6m	greatest brilliancy	-892 Dec 19 j 00:34	8°Ϸ03'36	1.2m
direct	-897 Dec 20 j 14:53	3°Ϸ59'44		evening set	-891 Jan 02 j 03:05	19°Ϸ10'13	
	-896 Mar 10 j 08:36	0°Π			-891 Jan 15 j 22:40	0°≈	
	-896 May 04 j 06:38	0°Ϸ			-891 Feb 23 j 22:15	0°Ϸ	
	-896 Jun 22 j 22:13	0°Ω					
	-896 Aug 08 j 08:31	0°ϯ		conjunction	-891 Mar 09 j 02:57	9°Ϸ54'37	0°-48'-44
evening set	-896 Sep 06 j 03:12	19°ϯ33'32		minimum elong	-891 Mar 09 j 05:42	9°Ϸ59'45	0°48'44
max. Earth dist.	-896 Sep 21 j 05:36	0°Δ07'26	2.49003 AU		-891 Apr 05 j 12:03	0°Υ	
	-896 Sep 21 j 01:23	0°Δ		max. Earth dist.	-891 Apr 24 j 07:59	13°Υ26'08	2.47846 AU
				morning rise	-891 May 09 j 18:39	24°Υ13'36	
conjunction	-896 Oct 27 j 17:53	26°Δ31'20	0°00'46		-891 May 18 j 03:56	0°Ϸ	
minimum elong	-896 Oct 27 j 17:57	26°Δ31'27	0°00'46	asc. node	-891 Jun 03 j 21:01	11°Ϸ20'02	
behind sun begin	-896 Oct 26 j 19:12	25°Δ49'28			-891 Jul 02 j 03:22	0°Π	
behind sun end	-896 Oct 28 j 16:42	27°Δ13'29			-891 Aug 18 j 15:48	0°Ϸ	
desc. node	-896 Oct 28 j 21:22	27°Δ22'07			-891 Oct 08 j 21:02	0°Ω	
	-896 Nov 01 j 10:34	0°ϯ			-891 Dec 11 j 06:02	0°ϯ	
	-896 Dec 11 j 01:52	0°Ϸ		retrograde	-890 Jan 19 j 20:43	7°ϯ52'07	
morning rise	-896 Dec 24 j 05:09	10°Ϸ09'02			-890 Feb 25 j 02:38	30°Ϸ	
	-895 Jan 18 j 16:22	0°Ϸ		opposition	-890 Feb 26 j 15:37	29°Ω24'51	4°11'28
	-895 Feb 26 j 01:50	0°≈		greatest brilliancy	-890 Feb 27 j 19:52	28°Ω57'50	-1.5m
	-895 Apr 06 j 03:46	0°Ϸ		min. Earth dist.	-890 Mar 04 j 14:38	27°Ω08'33	0.60784 AU

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 2

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

direct	-890 Apr 08 j 13:59	19°♏33'38		max. Earth dist.	-885 Jul 16 j 21:10	15°♏45'39	2.67153 AU
	-890 May 23 j 02:27	0°♎					
desc. node	-890 Jun 20 j 18:30	13°♎59'07		conjunction	-885 Jul 22 j 20:43	19°♏34'45	1°09'25
	-890 Jul 17 j 18:27	0°♎		minimum elong	-885 Jul 22 j 20:24	19°♏34'14	1°09'26
	-890 Aug 30 j 22:27	0°♎			-885 Aug 08 j 03:10	0°♏	
	-890 Oct 10 j 06:02	0°♎		morning rise	-885 Sep 05 j 13:42	18°♏22'59	
	-890 Nov 17 j 23:53	0°♎			-885 Sep 23 j 08:09	0°♎	
	-890 Dec 26 j 13:47	0°♎			-885 Nov 07 j 10:15	0°♎	
	-889 Feb 04 j 00:46	0°♎			-885 Dec 21 j 09:33	0°♎	
evening set	-889 Mar 08 j 12:58	23°♎51'39			-884 Feb 02 j 11:58	0°♎	
	-889 Mar 17 j 02:21	0°♎		desc. node	-884 Feb 10 j 16:22	5°♎44'27	
asc. node	-889 Apr 21 j 20:25	25°♎00'43			-884 Mar 16 j 06:33	0°♎	
	-889 Apr 29 j 03:39	0°♎			-884 Apr 29 j 06:36	0°♎	
					-884 Jun 20 j 05:54	0°♎	
conjunction	-889 May 04 j 02:51	3°♎22'18	0°07'22	retrograde	-884 Aug 01 j 05:02	10°♎48'18	
minimum elong	-889 May 04 j 02:27	3°♎21'39	0°07'22	min. Earth dist.	-884 Aug 28 j 04:16	5°♎55'38	0.42802 AU
behind sun begin	-889 May 03 j 06:22	2°♎47'38		greatest brilliancy	-884 Sep 03 j 05:19	3°♎58'08	-2.5m
behind sun end	-889 May 04 j 22:32	3°♎55'37		opposition	-884 Sep 04 j 21:35	3°♎25'10	-5°00'-26
max. Earth dist.	-889 May 29 j 12:21	20°♎21'49	2.59383 AU		-884 Sep 16 j 08:30	30°♎	
	-889 Jun 13 j 04:13	0°♎		direct	-884 Oct 06 j 09:43	27°♎21'33	
morning rise	-889 Jun 24 j 15:29	7°♎27'31			-884 Oct 27 j 02:54	0°♎	
	-889 Jul 29 j 21:10	0°♎		asc. node	-884 Dec 11 j 17:10	17°♎57'22	
	-889 Sep 16 j 01:06	0°♎			-883 Jan 03 j 13:32	0°♎	
	-889 Nov 05 j 05:14	0°♎			-883 Feb 24 j 09:04	0°♎	
	-889 Dec 30 j 22:09	0°♎			-883 Apr 14 j 21:51	0°♎	
retrograde	-888 Mar 09 j 05:17	20°♎34'21			-883 Jun 02 j 11:41	0°♎	
opposition	-888 Apr 12 j 17:54	13°♎39'45	1°20'21	evening set	-883 Jul 13 j 02:44	25°♎37'54	
greatest brilliancy	-888 Apr 13 j 11:04	13°♎25'03	-2.1m		-883 Jul 19 j 22:29	0°♎	
min. Earth dist.	-888 Apr 21 j 06:48	10°♎44'49	0.48991 AU	max. Earth dist.	-883 Aug 08 j 22:47	12°♎56'35	2.62936 AU
desc. node	-888 May 07 j 17:03	6°♎21'20					
direct	-888 May 20 j 17:58	5°♎11'17		conjunction	-883 Aug 28 j 06:47	25°♎38'49	1°01'17
	-888 Jul 29 j 11:55	0°♎		minimum elong	-883 Aug 28 j 07:51	25°♎40'34	1°01'17
	-888 Sep 13 j 03:10	0°♎			-883 Sep 03 j 19:57	0°♎	
	-888 Oct 24 j 04:23	0°♎		morning rise	-883 Oct 13 j 13:50	26°♎59'15	
	-888 Dec 03 j 06:53	0°♎			-883 Oct 17 j 22:08	0°♎	
	-887 Jan 13 j 00:04	0°♎			-883 Nov 29 j 06:01	0°♎	
	-887 Feb 24 j 03:46	0°♎		desc. node	-883 Dec 28 j 15:07	21°♎28'36	
asc. node	-887 Mar 08 j 19:35	8°♎46'17			-882 Jan 09 j 02:49	0°♎	
	-887 Apr 09 j 02:07	0°♎			-882 Feb 18 j 00:23	0°♎	
evening set	-887 Apr 26 j 11:31	11°♎33'53			-882 Mar 29 j 16:48	0°♎	
	-887 May 24 j 15:41	0°♎			-882 May 09 j 09:05	0°♎	
					-882 Jun 22 j 09:01	0°♎	
conjunction	-887 Jun 15 j 03:58	13°♎53'05	0°50'36		-882 Aug 18 j 23:05	0°♎	
minimum elong	-887 Jun 15 j 02:38	13°♎50'56	0°50'36	retrograde	-882 Sep 19 j 04:44	6°♎03'47	
max. Earth dist.	-887 Jun 23 j 04:42	19°♎02'17	2.65980 AU		-882 Oct 18 j 20:22	30°♎	
	-887 Jul 10 j 08:23	0°♎		min. Earth dist.	-882 Oct 21 j 08:27	29°♎03'30	0.55478 AU
morning rise	-887 Jul 31 j 12:55	13°♎29'19		opposition	-882 Oct 28 j 02:00	26°♎26'56	0°-4'-25
	-887 Aug 26 j 12:55	0°♎		greatest brilliancy	-881 Jul 26 j 14:40	16°♎16'33	-4.7m
	-887 Oct 12 j 19:32	0°♎		asc. node	-882 Oct 29 j 16:36	25°♎49'46	
	-887 Nov 29 j 06:22	0°♎		direct	-882 Dec 02 j 23:19	18°♎21'02	
	-886 Jan 16 j 17:25	0°♎			-881 Jan 20 j 19:54	0°♎	
	-886 Mar 10 j 05:01	0°♎			-881 Mar 22 j 13:13	0°♎	
desc. node	-886 Mar 25 j 17:10	7°♎41'35			-881 May 13 j 12:35	0°♎	
retrograde	-886 May 20 j 15:22	23°♎12'54			-881 Jul 01 j 06:10	0°♎	
opposition	-886 Jun 19 j 22:15	18°♎12'10	-5°-20'-56		-881 Aug 16 j 10:03	0°♎	
greatest brilliancy	-886 Jun 20 j 12:42	18°♎02'29	-2.8m	evening set	-881 Aug 21 j 07:04	3°♎15'57	
min. Earth dist.	-886 Jun 22 j 15:09	17°♎28'42	0.38066 AU	max. Earth dist.	-881 Sep 07 j 07:36	14°♎49'13	2.53738 AU
direct	-886 Jul 20 j 18:38	12°♎53'26			-881 Sep 29 j 03:41	0°♎	
	-886 Sep 14 j 17:14	0°♎					
	-886 Nov 03 j 21:41	0°♎		conjunction	-881 Oct 09 j 10:36	7°♎17'38	0°23'22
	-886 Dec 19 j 06:01	0°♎		minimum elong	-881 Oct 09 j 11:38	7°♎19'28	0°23'22
asc. node	-885 Jan 24 j 17:52	24°♎20'40			-881 Nov 09 j 17:10	0°♎	
	-885 Feb 02 j 06:37	0°♎		desc. node	-881 Nov 15 j 14:58	4°♎22'36	
	-885 Mar 20 j 02:30	0°♎		morning rise	-881 Dec 01 j 06:40	16°♎05'33	
	-885 May 05 j 20:39	0°♎			-881 Dec 19 j 14:11	0°♎	
evening set	-885 Jun 06 j 08:57	20°♎01'09			-880 Jan 27 j 10:22	0°♎	
	-885 Jun 22 j 02:30	0°♎			-880 Mar 06 j 00:38	0°♎	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 3

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-880 Apr 14 j 07:12	0°♄			-875 Sep 08 j 19:51	0°♍		
	-880 May 25 j 08:31	0°♅			-875 Oct 18 j 15:04	0°♆		
	-880 Jul 08 j 20:35	0°♄			-875 Nov 26 j 02:00	0°♅		
	-880 Aug 30 j 18:49	0°♂			-874 Jan 03 j 10:04	0°♄		
asc. node	-880 Sep 15 j 14:48	6°♂54'30			-874 Feb 11 j 15:05	0°♄		
retrograde	-880 Oct 26 j 03:29	15°♂52'28		evening set	-874 Feb 12 j 22:39	0°♄59'16		
min. Earth dist.	-880 Dec 02 j 01:11	7°♂12'00	0.64577 AU		-874 Mar 24 j 10:40	0°♅		
opposition	-880 Dec 05 j 05:48	5°♂55'08	2°57'12					
greatest brilliancy	-880 Dec 04 j 17:27	6°♂07'32	-1.4m	conjunction	-874 Apr 14 j 08:13	14°♅49'14	0°-14'-37	
	-880 Dec 21 j 15:21	30°♄		minimum elong	-874 Apr 14 j 09:06	14°♅50'46	0°14'37	
direct	-879 Jan 13 j 07:45	26°♄39'14		behind sun begin	-874 Apr 13 j 23:48	14°♅34'30		
	-879 Feb 07 j 01:02	0°♂		behind sun end	-874 Apr 14 j 18:23	15°♅07'01		
	-879 Apr 18 j 16:50	0°♄			-874 May 06 j 06:43	0°♄		
	-879 Jun 10 j 01:16	0°♂		asc. node	-874 May 08 j 12:52	1°♄32'23		
	-879 Jul 27 j 08:20	0°♄		max. Earth dist.	-874 May 17 j 15:22	7°♄42'56	2.55386 AU	
	-879 Sep 09 j 06:04	0°♂		morning rise	-874 Jun 08 j 04:04	22°♄05'37		
desc. node	-879 Oct 02 j 13:53	16°♄45'01			-874 Jun 20 j 04:55	0°♂		
evening set	-879 Oct 05 j 16:13	19°♄00'51			-874 Aug 06 j 01:49	0°♄		
	-879 Oct 20 j 12:47	0°♍			-874 Sep 24 j 00:13	0°♂		
max. Earth dist.	-879 Oct 24 j 23:57	3°♍20'25	2.41254 AU		-874 Nov 15 j 15:25	0°♄		
	-879 Nov 28 j 22:29	0°♆		retrograde	-873 Jan 26 j 06:48	0°♂		
					-873 Feb 16 j 22:27	2°♄37'01		
conjunction	-879 Dec 02 j 01:33	2°♆25'30	0°-38'-15		-873 Mar 09 j 08:43	30°♄		
minimum elong	-879 Dec 01 j 23:09	2°♆20'51	0°38'15	opposition	-873 Mar 24 j 23:53	24°♄59'46	2°51'27	
	-878 Jan 06 j 06:54	0°♅		greatest brilliancy	-873 Mar 26 j 05:13	24°♄33'07	-1.8m	
morning rise	-878 Feb 06 j 04:44	24°♅18'43		min. Earth dist.	-873 Apr 01 j 21:44	22°♄08'05	0.54118 AU	
	-878 Feb 13 j 11:05	0°♄		direct	-873 May 03 j 14:42	15°♄44'50		
	-878 Mar 24 j 08:26	0°♄		desc. node	-873 May 25 j 09:57	18°♄42'33		
	-878 May 03 j 19:23	0°♅			-873 Jun 24 j 01:20	0°♂		
	-878 Jun 15 j 15:59	0°♄			-873 Aug 13 j 22:17	0°♍		
	-878 Aug 01 j 01:58	0°♂			-873 Sep 25 j 04:07	0°♆		
asc. node	-878 Aug 03 j 13:38	1°♂31'15			-873 Nov 03 j 21:05	0°♅		
	-878 Sep 23 j 16:15	0°♄			-873 Dec 13 j 03:23	0°♄		
retrograde	-878 Nov 29 j 19:10	20°♄03'15			-872 Jan 22 j 04:38	0°♄		
opposition	-877 Jan 08 j 16:46	10°♄27'04	4°25'30		-872 Mar 03 j 19:12	0°♅		
greatest brilliancy	-877 Jan 08 j 18:06	10°♄25'45	-1.2m	asc. node	-872 Mar 25 j 11:08	15°♅06'25		
min. Earth dist.	-877 Jan 09 j 08:13	10°♄11'40	0.67535 AU	evening set	-872 Apr 08 j 12:35	24°♅44'06		
direct	-877 Feb 18 j 14:16	0°♄34'42			-872 Apr 16 j 07:06	0°♄		
	-877 May 16 j 09:51	0°♂						
	-877 Jul 06 j 10:36	0°♄		conjunction	-872 May 30 j 09:13	29°♄13'09	0°36'31	
desc. node	-877 Aug 20 j 12:24	0°♄03'51		minimum elong	-872 May 30 j 07:54	29°♄11'00	0°36'31	
	-877 Aug 20 j 10:11	0°♂			-872 May 31 j 13:58	0°♂		
	-877 Sep 30 j 22:07	0°♍		max. Earth dist.	-872 Jun 13 j 16:25	8°♂30'10	2.64044 AU	
	-877 Nov 09 j 05:38	0°♆		morning rise	-872 Jul 17 j 06:56	0°♄03'12		
evening set	-877 Dec 06 j 05:46	21°♆09'57			-872 Jul 17 j 04:55	0°♄		
	-877 Dec 17 j 10:26	0°♅			-872 Sep 02 j 15:22	0°♂		
	-876 Jan 24 j 12:30	0°♄			-872 Oct 20 j 16:48	0°♄		
					-872 Dec 08 j 23:45	0°♂		
conjunction	-876 Feb 11 j 02:44	13°♄41'04	-1°-3'-9		-871 Jan 31 j 06:43	0°♍		
minimum elong	-876 Feb 11 j 04:27	13°♄44'23	1°03'09	desc. node	-871 Apr 11 j 08:52	25°♍11'48		
	-876 Mar 03 j 09:57	0°♄		retrograde	-871 Apr 19 j 05:12	25°♍34'33		
max. Earth dist.	-876 Apr 01 j 18:53	21°♄55'06	2.42482 AU	opposition	-871 May 20 j 21:35	19°♍57'45	-2°-29'-20	
	-876 Apr 12 j 21:04	0°♅		greatest brilliancy	-871 May 21 j 18:04	19°♍42'28	-2.6m	
morning rise	-876 Apr 17 j 13:05	3°♅22'08		min. Earth dist.	-871 May 27 j 14:29	17°♍58'18	0.41258 AU	
	-876 May 25 j 11:10	0°♄		direct	-871 Jun 23 j 18:57	13°♍23'59		
asc. node	-876 Jun 20 j 13:54	17°♄35'20			-871 Aug 16 j 21:48	0°♆		
	-876 Jul 09 j 13:40	0°♂			-871 Oct 04 j 15:17	0°♅		
	-876 Aug 26 j 18:58	0°♄			-871 Nov 16 j 20:21	0°♄		
	-876 Oct 19 j 19:25	0°♂			-871 Dec 29 j 10:52	0°♄		
retrograde	-875 Jan 04 j 02:46	23°♄55'21		asc. node	-870 Feb 10 j 10:14	29°♄39'17		
opposition	-875 Feb 11 j 17:43	15°♄03'30	4°34'03		-870 Feb 10 j 22:25	0°♅		
greatest brilliancy	-875 Feb 12 j 15:33	14°♄042'15	-1.4m		-870 Mar 27 j 19:11	0°♄		
min. Earth dist.	-875 Feb 16 j 06:01	13°♄18'17	0.63945 AU		-870 May 12 j 23:21	0°♂		
direct	-875 Mar 25 j 00:38	5°♄03'35		evening set	-870 May 22 j 02:39	5°♂51'52		
	-875 Jun 08 j 14:37	0°♄			-870 Jun 28 j 22:18	0°♄		
desc. node	-875 Jul 07 j 11:01	16°♄47'29						
	-875 Jul 28 j 00:06	0°♂		conjunction	-870 Jul 08 j 11:16	6°♄04'32	1°05'11	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 4

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

minimum elong	-870 Jul 08 j 10:26	6°03'12	1°05'12			-865 Oct 28 j 07:42	30°R8	
max. Earth dist.	-870 Jul 07 j 18:49	5°038'21	2.67359 AU	min. Earth dist.	-865 Nov 17 j 06:57	23°832'13	0.61669 AU	
	-870 Aug 14 j 22:57	0°0		opposition	-865 Nov 21 j 22:48	21°840'43	1°59'51	
morning rise	-870 Aug 22 j 11:00	4°048'31		greatest brilliancy	-865 Nov 21 j 10:20	21°853'08	-1.5m	
	-870 Sep 30 j 11:28	0°0		direct	-865 Dec 29 j 23:03	12°847'21		
	-870 Nov 15 j 05:59	0°0			-864 Mar 01 j 11:49	0°II		
	-870 Dec 30 j 09:13	0°0			-864 Apr 28 j 10:39	0°0		
	-869 Feb 13 j 07:35	0°0			-864 Jun 17 j 21:42	0°0		
desc. node	-869 Feb 27 j 09:33	9°020'10			-864 Aug 03 j 15:12	0°0		
	-869 Mar 31 j 05:53	0°0		evening set	-864 Sep 16 j 07:37	29°055'41		
	-869 May 22 j 22:00	0°0			-864 Sep 16 j 10:04	0°0		
retrograde	-869 Jul 07 j 21:09	12°018'42		max. Earth dist.	-864 Oct 01 j 05:08	10°033'08	2.46229 AU	
min. Earth dist.	-869 Aug 03 j 16:35	7°053'08	0.38932 AU	desc. node	-864 Oct 19 j 05:53	23°041'07		
greatest brilliancy	-869 Aug 07 j 14:50	6°045'47	-2.8m		-864 Oct 27 j 18:39	0°0		
opposition	-869 Aug 09 j 00:28	6°021'38	-6°-37'-9					
direct	-869 Sep 07 j 20:57	1°009'18		conjunction	-864 Nov 08 j 16:49	8°055'32	0°-13'-26	
	-869 Nov 27 j 07:55	0°0		minimum elong	-864 Nov 08 j 16:00	8°053'59	0°13'26	
asc. node	-869 Dec 29 j 08:51	18°038'13		behind sun begin	-864 Nov 08 j 02:12	8°028'01		
	-868 Jan 17 j 01:45	0°0		behind sun end	-864 Nov 09 j 05:48	9°019'57		
	-868 Mar 05 j 11:46	0°0			-864 Dec 06 j 07:56	0°0		
	-868 Apr 22 j 14:41	0°0		morning rise	-863 Jan 08 j 05:42	25°036'39		
	-868 Jun 09 j 12:53	0°0			-863 Jan 13 j 20:07	0°0		
evening set	-868 Jun 28 j 12:51	11°059'44		greatest brilliancy	-863 Feb 10 j 17:45	21°052'41	1.2m	
	-868 Jul 26 j 18:12	0°0			-863 Feb 21 j 03:18	0°0		
max. Earth dist.	-868 Jul 30 j 08:40	2°019'05	2.65231 AU		-863 Apr 01 j 02:47	0°0		
					-863 May 11 j 16:39	0°0		
conjunction	-868 Aug 13 j 11:27	11°027'02	1°07'49		-863 Jun 23 j 21:38	0°0		
minimum elong	-868 Aug 13 j 12:01	11°027'58	1°07'49		-863 Aug 10 j 13:53	0°0		
	-868 Sep 10 j 17:29	0°0		asc. node	-863 Aug 20 j 06:25	5°034'01		
morning rise	-868 Sep 27 j 16:31	11°019'45			-863 Oct 10 j 17:35	0°0		
	-868 Oct 25 j 03:15	0°0		retrograde	-863 Nov 16 j 09:25	7°013'32		
	-868 Dec 06 j 23:34	0°0			-863 Dec 20 j 00:52	30°0RII		
desc. node	-867 Jan 14 j 08:36	27°042'09		opposition	-863 Dec 26 j 12:04	27°026'12	4°00'43	
	-867 Jan 17 j 12:00	0°0		greatest brilliancy	-863 Dec 26 j 06:29	27°031'48	-1.3m	
	-867 Feb 27 j 03:27	0°0		min. Earth dist.	-863 Dec 25 j 15:16	27°047'03	0.67136 AU	
	-867 Apr 08 j 17:14	0°0		direct	-862 Feb 04 j 20:21	17°044'59		
	-867 May 20 j 20:49	0°0			-862 Mar 28 j 01:19	0°0		
	-867 Jul 08 j 09:04	0°0			-862 May 26 j 15:16	0°0		
retrograde	-867 Sep 02 j 02:02	17°022'32			-862 Jul 14 j 15:51	0°0		
min. Earth dist.	-867 Oct 02 j 02:27	11°011'18	0.50601 AU		-862 Aug 28 j 02:04	0°0		
opposition	-867 Oct 09 j 20:12	8°018'32	-1°-47'-47	desc. node	-862 Sep 06 j 05:01	6°027'22		
greatest brilliancy	-867 Oct 09 j 02:39	8°034'52	-2.1m		-862 Oct 08 j 10:43	0°0		
direct	-867 Nov 13 j 02:07	0°053'35		evening set	-862 Nov 10 j 02:45	24°051'05		
asc. node	-867 Nov 15 j 07:24	0°055'30			-862 Nov 16 j 18:09	0°0		
	-866 Feb 06 j 03:54	0°0			-862 Dec 24 j 23:28	0°0		
	-866 Apr 01 j 00:24	0°0						
	-866 May 21 j 05:49	0°0		conjunction	-861 Jan 13 j 12:55	15°026'38	-1°-4'-17	
	-866 Jul 08 j 08:14	0°0		minimum elong	-861 Jan 13 j 11:37	15°024'05	1°04'18	
evening set	-866 Aug 05 j 14:34	18°015'45			-861 Feb 01 j 01:22	0°0		
	-866 Aug 23 j 08:22	0°0		max. Earth dist.	-861 Feb 15 j 11:08	11°013'55	2.37867 AU	
max. Earth dist.	-866 Aug 25 j 22:06	1°043'16	2.57893 AU		-861 Mar 11 j 21:33	0°0		
				morning rise	-861 Mar 23 j 23:10	9°006'22		
conjunction	-866 Sep 22 j 02:03	20°011'29	0°41'43		-861 Apr 21 j 07:09	0°0		
minimum elong	-866 Sep 22 j 03:26	20°013'51	0°41'41		-861 Jun 02 j 21:23	0°0		
	-866 Oct 06 j 04:24	0°0		asc. node	-861 Jul 08 j 04:49	23°031'17		
morning rise	-866 Nov 10 j 12:54	25°016'28			-861 Jul 18 j 06:43	0°0		
	-866 Nov 17 j 00:07	0°0			-861 Sep 05 j 16:11	0°0		
desc. node	-866 Dec 02 j 07:03	11°017'16			-861 Nov 04 j 16:27	0°0		
	-866 Dec 27 j 05:01	0°0		retrograde	-861 Dec 21 j 11:52	10°040'55		
	-865 Feb 04 j 09:19	0°0		opposition	-860 Jan 29 j 18:03	1°029'01	4°40'49	
	-865 Mar 15 j 07:04	0°0		greatest brilliancy	-860 Jan 30 j 07:55	1°015'21	-1.3m	
	-865 Apr 23 j 21:38	0°0		min. Earth dist.	-860 Feb 01 j 18:22	0°017'51	0.66127 AU	
	-865 Jun 04 j 13:14	0°0			-860 Feb 02 j 12:36	30°0R0		
	-865 Jul 20 j 19:46	0°0		direct	-860 Mar 11 j 01:55	21°028'02		
	-865 Sep 27 j 06:04	0°0			-860 Apr 20 j 23:34	0°0		
asc. node	-865 Oct 03 j 07:03	0°058'53			-860 Jun 20 j 03:06	0°0		
retrograde	-865 Oct 13 j 02:43	1°037'19		desc. node	-860 Jul 24 j 03:13	21°021'32		

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 5

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-860 Aug 06 j 00:05	0°♄		minimum elong	-855 Jun 23 j 18:51	22°♄22'40	0°57'05
	-860 Sep 17 j 02:45	0°♍		max. Earth dist.	-855 Jun 28 j 14:15	25°♄27'01	2.66716 AU
	-860 Oct 26 j 15:21	0°♎			-855 Jul 05 j 17:22	0°♏	
	-860 Dec 03 j 22:33	0°♐		morning rise	-855 Aug 08 j 13:35	21°♏33'11	
	-859 Jan 11 j 03:00	0°♑			-855 Aug 21 j 19:52	0°♒	
evening set	-859 Jan 17 j 16:56	5°♑07'23			-855 Oct 07 j 18:54	0°♓	
	-859 Feb 19 j 03:38	0°♒			-855 Nov 23 j 12:28	0°♄	
					-854 Jan 09 j 11:04	0°♍	
conjunction	-859 Mar 23 j 00:20	23°♒39'12	0°-37'-7		-854 Feb 26 j 22:10	0°♎	
minimum elong	-859 Mar 23 j 02:38	23°♒43'25	0°37'06	desc. node	-854 Mar 16 j 01:33	10°♎00'44	
	-859 Mar 31 j 18:26	0°♓			-854 Apr 24 j 05:26	0°♏	
max. Earth dist.	-859 May 03 j 18:18	23°♓19'57	2.50675 AU	retrograde	-854 Jun 07 j 18:15	10°♏52'56	
	-859 May 13 j 10:25	0°♈		opposition	-854 Jul 08 j 02:19	5°♏50'18	-6°-27'-48
morning rise	-859 May 21 j 00:50	5°♈11'09		greatest brilliancy	-854 Jul 08 j 00:26	5°♏51'33	-2.9m
asc. node	-859 May 25 j 04:37	8°♈00'11		min. Earth dist.	-854 Jul 07 j 19:24	5°♏54'54	0.37498 AU
	-859 Jun 27 j 07:55	0°♉		direct	-854 Aug 07 j 01:12	0°♏51'34	
	-859 Aug 13 j 12:24	0°♊			-854 Oct 24 j 13:31	0°♑	
	-859 Oct 02 j 15:44	0°♋			-854 Dec 12 j 00:02	0°♒	
	-859 Nov 29 j 00:26	0°♌		asc. node	-853 Jan 15 j 00:14	22°♒00'23	
retrograde	-858 Jan 29 j 11:25	16°♌43'59			-853 Jan 27 j 07:54	0°♓	
opposition	-858 Mar 07 j 17:31	8°♌32'39	3°49'16		-853 Mar 14 j 20:20	0°♈	
greatest brilliancy	-858 Mar 08 j 23:51	8°♌04'05	-1.6m		-853 Apr 30 j 23:57	0°♉	
min. Earth dist.	-858 Mar 14 j 11:20	6°♌00'50	0.58621 AU	evening set	-853 Jun 14 j 21:55	28°♌23'52	
	-858 Apr 04 j 04:15	30°♌05'35			-853 Jun 17 j 10:40	0°♊	
direct	-858 Apr 17 j 08:02	28°♌50'35		max. Earth dist.	-853 Jul 22 j 05:13	22°♌06'24	2.66704 AU
	-858 Apr 30 j 23:05	0°♋					
desc. node	-858 Jun 11 j 02:13	14°♋08'21		conjunction	-853 Jul 31 j 01:58	27°♌47'04	1°10'02
	-858 Jul 10 j 05:42	0°♌		minimum elong	-853 Jul 31 j 01:58	27°♌47'04	1°10'03
	-858 Aug 24 j 20:36	0°♍			-853 Aug 03 j 12:46	0°♎	
	-858 Oct 04 j 16:17	0°♎		morning rise	-853 Sep 13 j 19:40	26°♎49'10	
	-858 Nov 12 j 16:32	0°♏			-853 Sep 18 j 15:38	0°♐	
	-858 Dec 21 j 10:57	0°♑			-853 Nov 02 j 11:20	0°♒	
	-857 Jan 30 j 01:43	0°♒			-853 Dec 15 j 23:51	0°♄	
	-857 Mar 12 j 06:48	0°♓			-852 Jan 27 j 10:04	0°♎	
evening set	-857 Mar 20 j 18:28	6°♓00'39		desc. node	-852 Feb 01 j 00:27	3°♓17'13	
asc. node	-857 Apr 12 j 03:15	21°♓35'01			-852 Mar 09 j 05:22	0°♏	
	-857 Apr 24 j 10:40	0°♈			-852 Apr 20 j 11:12	0°♑	
					-852 Jun 05 j 07:09	0°♒	
conjunction	-857 May 14 j 10:54	13°♈27'50	0°18'55	retrograde	-852 Aug 13 j 14:26	25°♒25'03	
minimum elong	-857 May 14 j 10:02	13°♈26'23	0°18'55	min. Earth dist.	-852 Sep 10 j 13:14	20°♒05'17	0.45492 AU
max. Earth dist.	-857 Jun 04 j 17:16	27°♈30'55	2.61275 AU	greatest brilliancy	-852 Sep 17 j 03:48	17°♒48'26	-2.4m
	-857 Jun 08 j 12:25	0°♉		opposition	-852 Sep 18 j 14:26	17°♒18'20	-3°-49'-27
morning rise	-857 Jul 03 j 11:38	16°♉10'17		direct	-852 Oct 21 j 01:45	10°♒43'38	
	-857 Jul 25 j 03:24	0°♊		asc. node	-852 Dec 02 j 00:13	20°♒07'06	
	-857 Sep 10 j 23:22	0°♋			-852 Dec 24 j 09:21	0°♓	
	-857 Oct 30 j 04:46	0°♌			-851 Feb 17 j 20:56	0°♈	
	-857 Dec 21 j 16:13	0°♍			-851 Apr 09 j 13:19	0°♉	
	-856 Mar 02 j 04:56	0°♎			-851 May 28 j 14:59	0°♊	
retrograde	-856 Mar 22 j 19:38	2°♎23'24			-851 Jul 15 j 06:57	0°♋	
	-856 Apr 11 j 09:17	30°♎05'36		evening set	-851 Jul 21 j 13:35	4°♎01'41	
opposition	-856 Apr 25 j 07:23	25°♎55'45	0°09'36	max. Earth dist.	-851 Aug 14 j 22:21	19°♎52'14	2.61360 AU
greatest brilliancy	-856 Jan 08 j 17:08	9°♎20'55	-3.4m		-851 Aug 30 j 05:39	0°♌	
desc. node	-856 Apr 28 j 02:17	25°♎00'33					
min. Earth dist.	-856 May 03 j 17:02	23°♎10'23	0.46086 AU	conjunction	-851 Sep 06 j 00:58	4°♌33'14	0°55'26
direct	-856 Jun 01 j 02:29	18°♎02'09		minimum elong	-851 Sep 06 j 02:14	4°♌35'21	0°55'26
	-856 Jul 16 j 04:59	0°♍			-851 Oct 13 j 05:53	0°♎	
	-856 Sep 05 j 01:42	0°♎		morning rise	-851 Oct 23 j 05:06	6°♎58'49	
	-856 Oct 17 j 12:22	0°♏			-851 Nov 24 j 09:35	0°♐	
	-856 Nov 27 j 08:12	0°♑		desc. node	-851 Dec 18 j 23:39	18°♐02'43	
	-855 Jan 07 j 12:46	0°♒			-850 Jan 04 j 00:21	0°♓	
	-855 Feb 19 j 01:01	0°♓			-850 Feb 12 j 14:55	0°♈	
asc. node	-855 Feb 27 j 00:49	5°♓30'48			-850 Mar 23 j 23:05	0°♉	
	-855 Apr 04 j 05:30	0°♈			-850 May 03 j 02:44	0°♊	
evening set	-855 May 06 j 03:20	21°♈01'12			-850 Jun 14 j 21:19	0°♋	
	-855 May 19 j 23:14	0°♉			-850 Aug 04 j 09:21	0°♌	
				retrograde	-850 Sep 28 j 05:49	16°♌07'22	
conjunction	-855 Jun 23 j 20:04	22°♉24'37	0°57'05	asc. node	-850 Oct 19 j 22:34	12°♌47'00	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 6

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

min. Earth dist.	-850 Oct 31 j 12:29	8°♄42'32	0.57906 AU	evening set	-845 Dec 21 j 21:17	7°♄19'07	
opposition	-850 Nov 06 j 13:36	6°♄20'00	0°46'25		-844 Jan 19 j 17:07	0°≈	
greatest brilliancy	-850 Nov 06 j 06:53	6°♄26'36	-1.7m				
	-850 Nov 25 j 14:34	30°♄♂		conjunction	-844 Feb 26 j 16:59	29°≈18'42	0°-56'-9
direct	-850 Dec 13 j 07:10	27°♂55'04		minimum elong	-844 Feb 26 j 19:37	29°≈23'43	0°56'09
	-849 Jan 01 j 05:20	0°♄			-844 Feb 27 j 14:45	0°♄	
	-849 Mar 15 j 13:45	0°♂			-844 Apr 08 j 02:09	0°♂	
	-849 May 08 j 02:33	0°♄		max. Earth dist.	-844 Apr 15 j 22:32	5°♂39'08	2.45465 AU
	-849 Jun 26 j 09:02	0°♂		morning rise	-844 Apr 30 j 13:29	16°♂02'16	
	-849 Aug 11 j 17:46	0°♄			-844 May 20 j 15:48	0°♄	
evening set	-849 Aug 30 j 17:56	12°♄49'17		asc. node	-844 Jun 10 j 19:34	14°♄19'30	
max. Earth dist.	-849 Sep 15 j 09:49	23°♄37'27	2.51189 AU		-844 Jul 04 j 14:52	0°♂	
	-849 Sep 24 j 12:11	0°♄			-844 Aug 21 j 08:00	0°♄	
					-844 Oct 12 j 10:35	0°♂	
conjunction	-849 Oct 20 j 03:16	18°♄20'59	0°10'52		-844 Dec 23 j 23:56	0°♄	
minimum elong	-849 Oct 20 j 03:49	18°♄21'58	0°10'50	retrograde	-843 Jan 12 j 22:10	2°♄13'53	
behind sun begin	-849 Oct 19 j 11:00	17°♄51'27			-843 Jan 31 j 14:59	30°♄♂	
behind sun end	-849 Oct 20 j 20:37	18°♄52'31		opposition	-843 Feb 20 j 03:12	23°♂34'58	4°22'44
desc. node	-849 Nov 05 j 22:25	0°♄40'38		greatest brilliancy	-843 Feb 21 j 04:48	23°♂10'18	-1.4m
	-849 Nov 05 j 00:27	0°♄		min. Earth dist.	-843 Feb 25 j 11:22	21°♂31'47	0.62328 AU
morning rise	-849 Dec 14 j 08:38	29°♄40'11		direct	-843 Apr 02 j 07:00	13°♂38'49	
	-849 Dec 14 j 18:58	0°♄			-843 May 30 j 09:02	0°♄	
	-848 Jan 22 j 12:17	0°♄		desc. node	-843 Jun 27 j 19:28	15°♄13'56	
	-848 Feb 29 j 23:40	0°≈			-843 Jul 21 j 18:04	0°♄	
	-848 Apr 09 j 02:36	0°♄			-843 Sep 03 j 07:59	0°♄	
	-848 May 19 j 21:43	0°♂			-843 Oct 13 j 10:18	0°♄	
	-848 Jul 02 j 17:39	0°♄			-843 Nov 21 j 00:57	0°♄	
	-848 Aug 21 j 19:50	0°♂			-843 Dec 29 j 11:39	0°≈	
asc. node	-848 Sep 05 j 21:36	7°♂38'21			-842 Feb 06 j 18:47	0°♄	
retrograde	-848 Nov 02 j 22:59	24°♂05'30		evening set	-842 Feb 26 j 15:24	14°♄44'16	
min. Earth dist.	-848 Dec 10 j 18:04	15°♂07'30	0.65757 AU		-842 Mar 19 j 16:18	0°♂	
opposition	-848 Dec 13 j 02:54	14°♂10'29	3°24'16				
greatest brilliancy	-848 Dec 12 j 16:11	14°♂21'14	-1.3m	conjunction	-842 Apr 25 j 21:09	26°♂06'00	0°-1'-46
direct	-847 Jan 21 j 17:22	4°♂44'13		minimum elong	-842 Apr 25 j 21:17	26°♂06'14	0°01'46
	-847 Apr 11 j 09:40	0°♄		behind sun begin	-842 Apr 24 j 22:24	25°♂26'55	
	-847 Jun 04 j 13:49	0°♂		behind sun end	-842 Apr 26 j 20:10	26°♂45'30	
	-847 Jul 22 j 09:55	0°♄		asc. node	-842 Apr 28 j 18:34	28°♂05'03	
	-847 Sep 04 j 11:53	0°♄			-842 May 01 j 13:47	0°♄	
desc. node	-847 Sep 22 j 21:15	13°♄08'25		max. Earth dist.	-842 May 24 j 18:14	15°♄38'41	2.57686 AU
	-847 Oct 15 j 19:31	0°♄			-842 Jun 15 j 11:55	0°♂	
evening set	-847 Oct 17 j 18:05	1°♄26'59		morning rise	-842 Jun 17 j 18:32	1°♂29'13	
max. Earth dist.	-847 Nov 16 j 02:06	23°♄44'19	2.38821 AU		-842 Aug 01 j 05:13	0°♄	
	-847 Nov 24 j 04:27	0°♄			-842 Sep 18 j 15:30	0°♂	
					-842 Nov 08 j 16:00	0°♄	
conjunction	-847 Dec 16 j 17:26	17°♄35'50	0°-50'-40		-841 Jan 07 j 00:56	0°♄	
minimum elong	-847 Dec 16 j 14:39	17°♄30'23	0°50'41	retrograde	-841 Feb 28 j 14:13	12°♄56'44	
	-846 Jan 01 j 11:42	0°♄		opposition	-841 Apr 04 j 20:14	5°♄42'06	2°03'43
	-846 Feb 08 j 14:53	0°≈		greatest brilliancy	-841 Apr 05 j 20:24	5°♄20'47	-2.0m
morning rise	-846 Feb 23 j 03:23	11°≈18'57		min. Earth dist.	-841 Apr 13 j 04:48	2°♄45'48	0.51336 AU
	-846 Mar 19 j 11:13	0°♄			-841 Apr 21 j 22:56	30°♄♄	
	-846 Apr 28 j 20:41	0°♂		direct	-841 May 13 j 16:14	26°♄50'02	
	-846 Jun 10 j 13:18	0°♄		desc. node	-841 May 15 j 17:54	26°♄51'46	
asc. node	-846 Jul 24 j 21:20	29°♄01'37			-841 Jun 04 j 23:44	0°♄	
	-846 Jul 26 j 10:37	0°♂			-841 Aug 05 j 19:02	0°♄	
	-846 Sep 15 j 21:11	0°♄			-841 Sep 18 j 15:13	0°♄	
retrograde	-846 Dec 07 j 13:23	27°♄48'11			-841 Oct 28 j 23:59	0°♄	
opposition	-845 Jan 16 j 07:01	18°♄19'42	4°34'27		-841 Dec 07 j 16:07	0°≈	
greatest brilliancy	-845 Jan 16 j 12:40	18°♄14'04	-1.2m		-840 Jan 17 j 00:34	0°♄	
min. Earth dist.	-845 Jan 17 j 18:48	17°♄44'09	0.67325 AU		-840 Feb 27 j 20:48	0°♂	
direct	-845 Feb 26 j 10:07	8°♄22'54		asc. node	-840 Mar 15 j 17:59	11°♂44'58	
	-845 May 08 j 15:55	0°♂			-840 Apr 11 j 12:59	0°♄	
	-845 Jun 30 j 18:44	0°♄		evening set	-840 Apr 18 j 22:45	4°♄58'06	
desc. node	-845 Aug 10 j 20:58	26°♄55'36			-840 May 26 j 22:22	0°♂	
	-845 Aug 15 j 07:54	0°♄					
	-845 Sep 26 j 00:42	0°♄		conjunction	-840 Jun 08 j 12:47	8°♂10'12	0°45'08
	-845 Nov 04 j 09:42	0°♄		minimum elong	-840 Jun 08 j 11:25	8°♂07'59	0°45'07
	-845 Dec 12 j 14:51	0°♄		max. Earth dist.	-840 Jun 19 j 08:17	15°♂08'21	2.65211 AU

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 7

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-840 Jul 12 j 13:24	0°☾		greatest brilliancy	-835 Oct 20 j 04:58	19°Υ27'52	-1.9m
morning rise	-840 Jul 25 j 12:32	8°☾15'09		asc. node	-835 Nov 05 j 14:53	13°Υ59'50	
	-840 Aug 28 j 20:04	0°♈		direct	-835 Nov 24 j 17:11	11°Υ32'13	
	-840 Oct 15 j 10:06	0°♍			-834 Jan 27 j 20:15	0°♌	
	-840 Dec 02 j 13:37	0°♊			-834 Mar 25 j 22:40	0°♈	
	-839 Jan 21 j 15:31	0°♋			-834 May 16 j 02:45	0°☾	
	-839 Mar 21 j 04:24	0°♌			-834 Jul 03 j 14:19	0°♈	
desc. node	-839 Apr 01 j 17:51	4°♌23'57		evening set	-834 Aug 14 j 10:49	27°♈08'59	
retrograde	-839 May 06 j 11:17	10°♌59'30			-834 Aug 18 j 17:38	0°♍	
opposition	-839 Jun 06 j 06:24	5°♌47'00	-4°-9'-39	max. Earth dist.	-834 Sep 01 j 18:14	9°♍26'02	2.55677 AU
greatest brilliancy	-839 Jun 07 j 04:03	5°♌31'53	-2.8m				
min. Earth dist.	-839 Jun 11 j 02:06	4°♌26'33	0.39196 AU	conjunction	-834 Oct 01 j 18:15	0°♊08'32	0°31'43
	-839 Jul 06 j 14:43	30°♋		minimum elong	-834 Oct 01 j 19:30	0°♊10'44	0°31'41
direct	-839 Jul 08 j 08:24	29°♋58'45			-834 Oct 01 j 13:23	0°♊	
	-839 Jul 10 j 02:10	0°♌			-834 Nov 12 j 06:34	0°♋	
	-839 Sep 24 j 08:20	0°♍		morning rise	-834 Nov 21 j 22:38	7°♋08'45	
	-839 Nov 09 j 08:20	0°♎		desc. node	-834 Nov 22 j 15:35	7°♋40'14	
	-839 Dec 23 j 05:17	0°♏			-834 Dec 22 j 07:36	0°♌	
asc. node	-838 Jan 31 j 16:27	26°♏48'43			-833 Jan 30 j 07:23	0°♍	
	-838 Feb 05 j 10:21	0°♎			-833 Mar 10 j 00:35	0°♎	
	-838 Mar 22 j 18:11	0°♌			-833 Apr 18 j 09:28	0°♏	
	-838 May 08 j 05:02	0°♈			-833 May 29 j 14:33	0°♎	
evening set	-838 May 30 j 22:21	14°♈29'56			-833 Jul 13 j 14:43	0°♌	
	-838 Jun 24 j 07:14	0°☾			-833 Sep 07 j 13:46	0°♈	
max. Earth dist.	-838 Jul 13 j 02:29	11°☾57'48	2.67348 AU	asc. node	-833 Sep 23 j 13:11	5°♈48'08	
				retrograde	-833 Oct 21 j 05:57	10°♈21'32	
conjunction	-838 Jul 16 j 18:01	14°☾17'16	1°08'07	min. Earth dist.	-833 Nov 26 j 09:54	1°♈56'13	0.63404 AU
minimum elong	-838 Jul 16 j 17:27	14°☾16'23	1°08'08	opposition	-833 Nov 30 j 06:20	0°♈23'46	2°35'03
	-838 Aug 10 j 07:56	0°♈		greatest brilliancy	-833 Nov 29 j 17:18	0°♈36'48	-1.4m
morning rise	-838 Aug 30 j 12:42	13°♈00'08			-833 Dec 01 j 06:09	30°♋	
	-838 Sep 25 j 16:27	0°♍		direct	-832 Jan 07 j 21:46	21°♋17'07	
	-838 Nov 10 j 01:53	0°♊			-832 Feb 18 j 20:14	0°♈	
	-838 Dec 24 j 13:03	0°♋			-832 Apr 22 j 04:54	0°☾	
	-837 Feb 06 j 08:33	0°♌			-832 Jun 12 j 17:41	0°♈	
desc. node	-837 Feb 17 j 17:15	7°♌48'17			-832 Jul 29 j 20:07	0°♍	
	-837 Mar 22 j 05:27	0°♍			-832 Sep 11 j 17:55	0°♊	
	-837 May 07 j 10:46	0°♎		evening set	-832 Sep 27 j 00:22	10°♊53'01	
retrograde	-837 Jul 22 j 18:40	29°♎17'27		desc. node	-832 Oct 09 j 14:42	20°♊02'03	
min. Earth dist.	-837 Aug 18 j 08:12	24°♎41'25	0.40845 AU	max. Earth dist.	-832 Oct 13 j 04:47	22°♊40'00	2.43452 AU
greatest brilliancy	-837 Aug 23 j 14:53	23°♎04'27	-2.6m		-832 Oct 23 j 02:41	0°♋	
opposition	-837 Aug 25 j 07:09	22°♎33'19	-5°-50'-5				
direct	-837 Sep 25 j 00:09	16°♎54'39		conjunction	-832 Nov 21 j 11:48	22°♋12'36	0°-27'-45
	-837 Nov 14 j 00:37	0°♏		minimum elong	-832 Nov 21 j 10:02	22°♋09'13	0°27'45
asc. node	-837 Dec 19 j 15:28	18°♏04'34			-832 Dec 01 j 14:41	0°♌	
	-836 Jan 09 j 14:21	0°♎			-831 Jan 09 j 00:55	0°♍	
	-836 Feb 28 j 15:57	0°♌		morning rise	-831 Jan 24 j 05:47	11°♍57'07	
	-836 Apr 17 j 12:12	0°♈			-831 Feb 16 j 06:07	0°♎	
	-836 Jun 04 j 18:45	0°☾			-831 Mar 27 j 03:29	0°♏	
evening set	-836 Jul 06 j 21:22	20°☾15'10			-831 May 06 j 14:06	0°♎	
	-836 Jul 22 j 03:33	0°♈			-831 Jun 18 j 12:04	0°♌	
max. Earth dist.	-836 Aug 04 j 22:03	8°♈52'54	2.64055 AU		-831 Aug 04 j 06:18	0°♈	
				asc. node	-831 Aug 10 j 11:49	3°♈43'58	
conjunction	-836 Aug 21 j 21:35	19°♈57'22	1°04'33		-831 Sep 28 j 19:48	0°☾	
minimum elong	-836 Aug 21 j 22:27	19°♈58'47	1°04'33	retrograde	-831 Nov 24 j 01:49	15°☾04'19	
	-836 Sep 06 j 02:31	0°♍		opposition	-830 Jan 03 j 02:42	5°☾22'45	4°16'31
morning rise	-836 Oct 06 j 15:14	20°♍33'58		greatest brilliancy	-830 Jan 03 j 00:48	5°☾24'39	-1.2m
	-836 Oct 20 j 08:44	0°♊		min. Earth dist.	-830 Jan 03 j 02:07	5°☾23'20	0.67491 AU
	-836 Dec 01 j 22:42	0°♋			-830 Jan 17 j 11:26	30°♋	
desc. node	-835 Jan 04 j 15:30	24°♋29'46		direct	-830 Feb 12 j 19:23	25°♋34'44	
	-835 Jan 12 j 02:37	0°♌			-830 Mar 13 j 14:17	0°☾	
	-835 Feb 21 j 07:41	0°♍			-830 May 20 j 04:39	0°♈	
	-835 Apr 02 j 08:17	0°♎			-830 Jul 09 j 08:39	0°♍	
	-835 May 13 j 11:53	0°♏			-830 Aug 23 j 03:41	0°♊	
	-835 Jun 27 j 17:50	0°♎		desc. node	-830 Aug 27 j 12:54	3°♊04'36	
retrograde	-835 Sep 12 j 01:23	28°♎45'20			-830 Oct 03 j 15:27	0°♋	
min. Earth dist.	-835 Oct 13 j 06:16	22°♎06'46	0.53356 AU		-830 Nov 11 j 23:42	0°♌	
opposition	-835 Oct 20 j 12:18	19°♎20'53	0°-45'-54	evening set	-830 Nov 24 j 12:37	9°♌47'01	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 8

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-830 Dec 20 j 04:55	0°☾			-825 Dec 13 j 22:02	0°♊		
	-829 Jan 27 j 06:41	0°♋			-824 Feb 09 j 04:07	0°♌		
				retrograde	-824 Apr 06 j 17:29	15°♍24'38		
conjunction	-829 Jan 29 j 16:40	1°♎53'26	-1°-5'-31	desc. node	-824 Apr 18 j 09:26	14°♍33'00		
minimum elong	-829 Jan 29 j 17:09	1°♎54'23	1°05'32	opposition	-824 May 09 j 04:44	9°♍25'11	-1°-15'-59	
	-829 Mar 07 j 02:44	0°♏		greatest brilliancy	-824 May 09 j 18:01	9°♍14'48	-2.5m	
max. Earth dist.	-829 Mar 18 j 21:02	8°♏52'58	2.40184 AU	min. Earth dist.	-824 May 16 j 21:37	7°♍01'05	0.43304 AU	
morning rise	-829 Apr 07 j 20:23	23°♏41'54		direct	-824 Jun 13 j 10:47	2°♍13'52		
	-829 Apr 16 j 11:47	0°♐			-824 Aug 26 j 02:12	0°♑		
	-829 May 29 j 00:18	0°♑			-824 Oct 10 j 02:51	0°♒		
asc. node	-829 Jun 28 j 11:57	20°♒28'23			-824 Nov 21 j 00:59	0°♓		
	-829 Jul 13 j 03:28	0°♈			-823 Jan 01 j 21:38	0°♏		
	-829 Aug 30 j 17:02	0°♉			-823 Feb 13 j 20:34	0°♐		
	-829 Oct 25 j 10:38	0°♊		asc. node	-823 Feb 17 j 08:15	2°♐23'23		
retrograde	-829 Dec 29 j 17:43	18°♊39'29			-823 Mar 30 j 08:34	0°♑		
opposition	-828 Feb 06 j 16:39	9°♊38'07	4°38'18	evening set	-823 May 15 j 09:23	0°♒03'59		
greatest brilliancy	-828 Feb 07 j 11:02	9°♊20'09	-1.3m		-823 May 15 j 06:54	0°♒		
min. Earth dist.	-828 Feb 10 j 13:19	8°♊07'36	0.65052 AU		-823 Jul 01 j 03:09	0°♓		
	-828 Mar 11 j 06:56	30°♋☾						
direct	-828 Mar 19 j 01:31	29°♓36'50		conjunction	-823 Jul 02 j 06:40	0°♓43'52	1°02'15	
	-828 Mar 27 j 00:38	0°♌		minimum elong	-823 Jul 02 j 05:39	0°♓42'14	1°02'15	
	-828 Jun 13 j 03:10	0°♍		max. Earth dist.	-823 Jul 03 j 22:23	1°♓47'10	2.67174 AU	
desc. node	-828 Jul 14 j 11:31	18°♍55'11		morning rise	-823 Aug 16 j 12:54	29°♓35'05		
	-828 Jul 31 j 09:01	0°♎			-823 Aug 17 j 04:30	0°♌		
	-828 Sep 11 j 22:04	0°♍			-823 Oct 02 j 21:29	0°♍		
	-828 Oct 21 j 14:52	0°♎			-823 Nov 18 j 01:38	0°♎		
	-828 Nov 29 j 00:04	0°♏			-822 Jan 02 j 21:43	0°♍		
	-827 Jan 06 j 06:06	0°♎			-822 Feb 18 j 01:31	0°♎		
evening set	-827 Feb 01 j 19:24	20°♎29'19		desc. node	-822 Mar 06 j 09:42	10°♎23'18		
	-827 Feb 14 j 08:15	0°♏			-822 Apr 07 j 16:03	0°♏		
	-827 Mar 27 j 00:25	0°♐		retrograde	-822 Jun 25 j 06:00	29°♏08'42		
				min. Earth dist.	-822 Jul 23 j 00:58	24°♏38'13	0.37913 AU	
conjunction	-827 Apr 05 j 00:32	6°♐27'03	0°-24'-19	greatest brilliancy	-822 Jul 25 j 11:51	23°♏58'00	-2.8m	
minimum elong	-827 Apr 05 j 02:03	6°♐29'46	0°24'19	opposition	-822 Jul 26 j 09:26	23°♏43'15	-6°-50'-56	
	-827 May 08 j 17:21	0°♑		direct	-822 Aug 24 j 23:20	18°♏44'19		
max. Earth dist.	-827 May 12 j 00:01	2°♑14'32	2.53361 AU		-822 Oct 09 j 01:06	0°♎		
asc. node	-827 May 15 j 11:09	4°♑36'12			-822 Dec 03 j 15:08	0°♏		
morning rise	-827 May 31 j 14:48	15°♑29'30		asc. node	-821 Jan 05 j 07:09	20°♏07'52		
	-827 Jun 22 j 13:39	0°♒			-821 Jan 20 j 23:45	0°♐		
	-827 Aug 08 j 12:13	0°♓			-821 Mar 09 j 10:44	0°♑		
	-827 Sep 26 j 20:14	0°♌			-821 Apr 26 j 02:01	0°♒		
	-827 Nov 19 j 23:03	0°♍			-821 Jun 12 j 18:45	0°♓		
retrograde	-826 Feb 08 j 16:13	26°♍01'33		evening set	-821 Jun 23 j 07:30	6°♓39'12		
opposition	-826 Mar 17 j 07:51	18°♍08'08	3°18'59	max. Earth dist.	-821 Jul 27 j 14:08	28°♓28'46	2.66000 AU	
greatest brilliancy	-826 Mar 18 j 14:26	17°♍39'52	-1.7m		-821 Jul 29 j 22:58	0°♌		
min. Earth dist.	-826 Mar 24 j 18:28	15°♍23'38	0.56234 AU					
direct	-826 Apr 26 j 11:29	8°♍39'00		conjunction	-821 Aug 08 j 06:55	6°♌00'39	1°09'14	
desc. node	-826 Jun 01 j 10:45	16°♍03'57		minimum elong	-821 Aug 08 j 07:15	6°♌01'10	1°09'15	
	-826 Jul 01 j 06:56	0°♎			-821 Sep 14 j 00:23	0°♍		
	-826 Aug 18 j 08:10	0°♍		morning rise	-821 Sep 22 j 05:16	5°♍26'23		
	-826 Sep 28 j 21:45	0°♎			-821 Oct 28 j 15:16	0°♎		
	-826 Nov 07 j 06:26	0°♏			-821 Dec 10 j 19:03	0°♍		
	-826 Dec 16 j 06:28	0°♎			-820 Jan 21 j 16:58	0°♎		
	-825 Jan 25 j 01:46	0°♏		desc. node	-820 Jan 22 j 09:15	0°♎29'30		
	-825 Mar 07 j 10:33	0°♐			-820 Mar 02 j 19:15	0°♏		
evening set	-825 Apr 01 j 06:04	17°♐21'41			-820 Apr 12 j 23:05	0°♎		
asc. node	-825 Apr 02 j 09:11	18°♐08'29			-820 May 26 j 04:11	0°♏		
	-825 Apr 19 j 17:32	0°♑			-820 Jul 18 j 13:47	0°♐		
				retrograde	-820 Aug 25 j 00:17	8°♐46'48		
conjunction	-825 May 24 j 06:57	23°♑03'57	0°29'31	min. Earth dist.	-820 Sep 23 j 01:46	2°♐59'08	0.48308 AU	
minimum elong	-825 May 24 j 05:46	23°♑02'01	0°29'31	greatest brilliancy	-820 Sep 30 j 00:52	0°♐28'08	-2.2m	
	-825 Jun 03 j 20:52	0°♒		opposition	-820 Oct 01 j 02:24	0°♐05'01	-2°-38'-6	
max. Earth dist.	-825 Jun 10 j 16:55	4°♒27'07	2.62908 AU		-820 Oct 01 j 07:57	30°♑♏		
morning rise	-825 Jul 12 j 01:36	24°♒39'04		direct	-820 Nov 03 j 13:23	23°♑01'33		
	-825 Jul 20 j 10:55	0°♓		asc. node	-820 Nov 22 j 05:33	25°♑07'30		
	-825 Sep 06 j 00:40	0°♌			-820 Dec 09 j 07:09	0°♐		
	-825 Oct 24 j 12:25	0°♍			-819 Feb 10 j 16:21	0°♑		

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 9

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-819 Apr 03 j 23:28	0°♊		minimum elong	-814 Jan 01 j 00:31	3°♊23'57	0°59'59
	-819 May 23 j 16:21	0°♋			-814 Feb 03 j 19:14	0°♋	
	-819 Jul 10 j 14:48	0°♌		morning rise	-814 Mar 11 j 16:18	27°♋46'00	
evening set	-819 Jul 30 j 02:38	12°♌32'54			-814 Mar 14 j 14:42	0°♋	
max. Earth dist.	-819 Aug 21 j 02:57	27°♌00'02	2.59541 AU		-814 Apr 23 j 22:50	0°♌	
	-819 Aug 25 j 15:10	0°♍			-814 Jun 05 j 12:23	0°♌	
				asc. node	-814 Jul 15 j 03:27	26°♌15'40	
conjunction	-819 Sep 15 j 01:13	13°♍45'38	0°48'04		-814 Jul 21 j 00:09	0°♍	
minimum elong	-819 Sep 15 j 02:35	13°♍47'58	0°48'03		-814 Sep 09 j 00:19	0°♍	
	-819 Oct 08 j 14:10	0°♎			-814 Nov 12 j 22:57	0°♎	
morning rise	-819 Nov 02 j 08:39	17°♎32'02		retrograde	-814 Dec 15 j 11:30	5°♎37'34	
	-819 Nov 19 j 14:17	0°♏			-813 Jan 14 j 06:36	30°♏♋	
desc. node	-819 Dec 09 j 07:48	14°♏31'13		opposition	-813 Jan 23 j 23:47	26°♏17'51	4°39'27
	-819 Dec 30 j 00:15	0°♐		greatest brilliancy	-813 Jan 24 j 09:59	26°♏07'45	-1.3m
	-818 Feb 07 j 09:09	0°♑		min. Earth dist.	-813 Jan 26 j 08:04	25°♏22'16	0.66789 AU
	-818 Mar 18 j 11:01	0°♒		direct	-813 Mar 06 j 06:37	16°♏18'06	
	-818 Apr 27 j 05:48	0°♓			-813 Apr 29 j 03:54	0°♏	
	-818 Jun 08 j 05:01	0°♑			-813 Jun 24 j 16:50	0°♑	
	-818 Jul 25 j 15:14	0°♒		desc. node	-813 Aug 01 j 04:07	23°♑58'44	
retrograde	-818 Oct 06 j 21:32	25°♒37'04			-813 Aug 10 j 00:54	0°♑	
asc. node	-818 Oct 10 j 04:47	25°♒32'31			-813 Sep 21 j 00:21	0°♒	
min. Earth dist.	-818 Nov 10 j 05:48	17°♒49'27	0.60085 AU		-813 Oct 30 j 12:13	0°♒	
opposition	-818 Nov 15 j 12:56	15°♒43'29	1°31'15		-813 Dec 07 j 18:40	0°♑	
greatest brilliancy	-818 Nov 15 j 01:55	15°♒54'24	-1.6m	greatest brilliancy	-813 Dec 09 j 08:07	1°♑13'54	1.2m
direct	-818 Dec 23 j 00:23	7°♑01'55		evening set	-812 Jan 06 j 14:49	23°♑30'29	
	-817 Mar 07 j 14:56	0°♒			-812 Jan 14 j 21:45	0°♒	
	-817 May 02 j 10:33	0°♓			-812 Feb 22 j 20:12	0°♓	
	-817 Jun 21 j 09:49	0°♏					
	-817 Aug 07 j 00:39	0°♑		conjunction	-812 Mar 12 j 08:24	13°♓52'59	0°-46'-3
evening set	-817 Sep 09 j 13:16	22°♑47'05		minimum elong	-812 Mar 12 j 11:06	13°♓58'00	0°46'02
	-817 Sep 19 j 20:39	0°♒			-812 Apr 03 j 08:08	0°♑	
max. Earth dist.	-817 Sep 24 j 08:16	3°♒10'11	2.48489 AU	max. Earth dist.	-812 Apr 26 j 16:24	16°♑38'54	2.48384 AU
desc. node	-817 Oct 27 j 06:45	27°♒00'25		morning rise	-812 May 12 j 12:12	27°♑39'58	
					-812 May 15 j 21:37	0°♒	
conjunction	-817 Oct 31 j 11:12	0°♒06'11	0°-2'-46	asc. node	-812 Jun 01 j 02:40	11°♒01'32	
minimum elong	-817 Oct 31 j 11:02	0°♒05'51	0°02'48		-812 Jun 29 j 18:04	0°♒	
behind sun begin	-817 Oct 30 j 12:11	29°♒23'34			-812 Aug 16 j 02:01	0°♓	
behind sun end	-817 Nov 01 j 09:52	0°♒48'11			-812 Oct 05 j 20:39	0°♏	
	-817 Oct 31 j 07:51	0°♓			-812 Dec 05 j 15:44	0°♑	
	-817 Dec 10 j 00:12	0°♓		retrograde	-811 Jan 22 j 03:33	10°♑49'33	
morning rise	-817 Dec 28 j 11:50	14°♓17'52		opposition	-811 Feb 28 j 21:06	2°♑25'13	4°05'31
	-816 Jan 17 j 14:49	0°♑		greatest brilliancy	-811 Mar 02 j 01:45	1°♑57'58	-1.5m
	-816 Feb 24 j 23:35	0°♒		min. Earth dist.	-811 Mar 07 j 00:50	0°♑05'02	0.60385 AU
	-816 Apr 03 j 23:49	0°♓			-811 Mar 07 j 06:13	30°♒♏	
	-816 May 14 j 14:17	0°♑		direct	-811 Apr 10 j 19:22	22°♏35'27	
	-816 Jun 26 j 22:51	0°♒			-811 May 17 j 10:38	0°♑	
	-816 Aug 14 j 07:25	0°♒		desc. node	-811 Jun 18 j 02:50	14°♑29'39	
asc. node	-816 Aug 27 j 04:46	7°♒07'06			-811 Jul 14 j 20:28	0°♒	
	-816 Oct 22 j 19:25	0°♓			-811 Aug 28 j 12:12	0°♓	
retrograde	-816 Nov 10 j 16:39	2°♓08'29			-811 Oct 08 j 00:24	0°♓	
	-816 Nov 28 j 13:24	30°♒♒			-811 Nov 15 j 20:11	0°♑	
min. Earth dist.	-816 Dec 19 j 07:53	22°♒54'08	0.66641 AU		-811 Dec 24 j 10:35	0°♒	
opposition	-816 Dec 20 j 20:35	22°♒17'21	3°47'01		-810 Feb 01 j 21:05	0°♓	
greatest brilliancy	-816 Dec 20 j 12:27	22°♒25'30	-1.3m	evening set	-810 Mar 11 j 12:01	27°♓34'06	
direct	-815 Jan 29 j 21:36	12°♒42'13			-810 Mar 14 j 21:29	0°♑	
	-815 Apr 02 j 20:30	0°♓		asc. node	-810 Apr 19 j 01:43	24°♑39'11	
	-815 May 29 j 19:16	0°♏			-810 Apr 26 j 21:12	0°♒	
	-815 Jul 17 j 08:29	0°♑					
	-815 Aug 30 j 16:37	0°♒		conjunction	-810 May 06 j 16:22	6°♒38'51	0°10'30
desc. node	-815 Sep 13 j 05:43	9°♒37'09		minimum elong	-810 May 06 j 15:50	6°♒37'58	0°10'30
	-815 Oct 11 j 01:59	0°♓		behind sun begin	-810 May 05 j 23:00	6°♒09'33	
evening set	-815 Oct 30 j 13:41	14°♓42'00		behind sun end	-810 May 07 j 08:40	7°♒06'22	
	-815 Nov 19 j 10:53	0°♓		max. Earth dist.	-810 May 31 j 06:03	23°♒02'43	2.59768 AU
max. Earth dist.	-815 Dec 25 j 20:55	28°♓32'44	2.37324 AU		-810 Jun 10 j 19:59	0°♒	
	-815 Dec 27 j 17:09	0°♑		morning rise	-810 Jun 26 j 21:14	10°♒26'17	
					-810 Jul 27 j 10:54	0°♓	
conjunction	-814 Jan 01 j 02:48	3°♑28'28	0°-59'-58		-810 Sep 13 j 11:42	0°♏	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 10

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-810 Nov 02 j 08:28	0°♎				-804 May 30 j 23:32	0°♏	
	-810 Dec 26 j 22:30	0°♏		evening set		-804 Jul 15 j 06:51	28°♏33'44	
retrograde	-809 Mar 13 j 05:55	24°♏00'12				-804 Jul 17 j 12:47	0°♏	
opposition	-809 Apr 16 j 13:03	17°♏10'32	1°03'50	max. Earth dist.		-804 Aug 10 j 16:57	15°♏37'44	2.62669 AU
greatest brilliancy	-809 Apr 17 j 03:09	16°♏58'32	-2.2m					
min. Earth dist.	-809 Apr 25 j 01:32	14°♏16'43	0.48440 AU	conjunction		-804 Aug 30 j 11:28	28°♏38'42	0°59'48
desc. node	-809 May 06 j 03:00	11°♏03'04		minimum elong		-804 Aug 30 j 12:35	28°♏40'32	0°59'48
direct	-809 May 24 j 08:38	8°♏47'27				-804 Sep 01 j 12:24	0°♎	
	-809 Jul 26 j 16:10	0°♎		morning rise		-804 Oct 15 j 21:47	0°♏09'34	
	-809 Sep 11 j 09:10	0°♏				-804 Oct 15 j 16:16	0°♏	
	-809 Oct 22 j 17:35	0°♏				-804 Nov 27 j 01:08	0°♎	
	-809 Dec 01 j 22:42	0°♏		desc. node		-804 Dec 26 j 00:12	21°♎09'41	
	-808 Jan 11 j 16:34	0°♏				-803 Jan 06 j 22:06	0°♏	
	-808 Feb 22 j 19:58	0°♏				-803 Feb 15 j 18:51	0°♏	
asc. node	-808 Mar 05 j 23:25	8°♏25'17				-803 Mar 27 j 09:10	0°♏	
	-808 Apr 06 j 17:40	0°♏				-803 May 06 j 20:46	0°♏	
evening set	-808 Apr 28 j 22:26	14°♏44'36				-803 Jun 19 j 08:28	0°♏	
	-808 May 22 j 06:34	0°♏				-803 Aug 12 j 16:41	0°♏	
				retrograde		-803 Sep 21 j 12:10	9°♏21'37	
conjunction	-808 Jun 17 j 09:19	16°♏50'53	0°52'31	min. Earth dist.		-803 Oct 23 j 20:45	2°♏16'56	0.55954 AU
minimum elong	-808 Jun 17 j 08:00	16°♏48'46	0°52'31	asc. node		-803 Oct 26 j 21:03	1°♏07'05	
max. Earth dist.	-808 Jun 24 j 18:56	21°♏35'29	2.66154 AU			-803 Oct 29 j 17:52	30°♏	
	-808 Jul 07 j 22:46	0°♏		opposition		-803 Oct 30 j 11:43	29°♏42'39	0°09'53
morning rise	-808 Aug 02 j 14:35	16°♏20'11		greatest brilliancy		-802 Jan 22 j 13:45	2°♏50'42	-2.6m
	-808 Aug 24 j 02:41	0°♏		direct		-803 Dec 05 j 14:08	21°♏32'48	
	-808 Oct 10 j 07:49	0°♏				-802 Jan 15 j 03:37	0°♏	
	-808 Nov 26 j 14:53	0°♏				-802 Mar 19 j 09:12	0°♏	
	-807 Jan 13 j 16:36	0°♏				-802 May 10 j 19:41	0°♏	
	-807 Mar 05 j 22:18	0°♏				-802 Jun 28 j 18:25	0°♏	
desc. node	-807 Mar 23 j 02:17	8°♏57'42				-802 Aug 14 j 01:48	0°♏	
retrograde	-807 May 24 j 15:09	27°♏45'39		evening set		-802 Aug 23 j 15:02	6°♏23'50	
opposition	-807 Jun 23 j 20:00	22°♏45'59	-5°-39'-10	max. Earth dist.		-802 Sep 09 j 06:09	17°♏43'05	2.53274 AU
greatest brilliancy	-807 Jun 24 j 08:23	22°♏37'42	-2.8m			-802 Sep 26 j 22:07	0°♏	
min. Earth dist.	-807 Jun 26 j 00:59	22°♏10'33	0.37886 AU					
direct	-807 Jul 24 j 13:00	17°♏32'14		conjunction		-802 Oct 11 j 23:23	10°♏40'40	0°20'13
	-807 Sep 09 j 02:37	0°♏		minimum elong		-802 Oct 12 j 00:19	10°♏42'20	0°20'12
	-807 Oct 31 j 15:09	0°♏				-802 Nov 07 j 13:34	0°♎	
	-807 Dec 16 j 11:56	0°♏		desc. node		-802 Nov 12 j 23:19	3°♎59'49	
asc. node	-806 Jan 21 j 22:26	24°♏11'56		morning rise		-802 Dec 04 j 05:12	19°♎54'36	
	-806 Jan 30 j 17:01	0°♏				-802 Dec 17 j 11:46	0°♏	
	-806 Mar 17 j 14:39	0°♏				-801 Jan 25 j 08:13	0°♏	
	-806 May 03 j 09:38	0°♏				-801 Mar 04 j 21:46	0°♏	
evening set	-806 Jun 08 j 14:02	22°♏57'59				-801 Apr 13 j 02:22	0°♏	
	-806 Jun 19 j 16:16	0°♏				-801 May 23 j 23:43	0°♏	
max. Earth dist.	-806 Jul 18 j 10:06	18°♏16'35	2.67105 AU			-801 Jul 07 j 03:20	0°♏	
						-801 Aug 27 j 18:40	0°♏	
conjunction	-806 Jul 24 j 23:25	22°♏27'48	1°09'43	asc. node		-801 Sep 13 j 19:42	7°♏52'54	
minimum elong	-806 Jul 24 j 23:11	22°♏27'25	1°09'43	retrograde		-801 Oct 29 j 04:29	18°♏47'03	
	-806 Aug 05 j 17:51	0°♏		min. Earth dist.		-801 Dec 05 j 06:57	10°♏02'54	0.64823 AU
morning rise	-806 Sep 07 j 16:00	21°♏17'17		opposition		-801 Dec 08 j 07:27	8°♏50'14	3°05'29
	-806 Sep 20 j 23:33	0°♏		greatest brilliancy		-801 Dec 07 j 19:14	9°♏02'29	-1.4m
	-806 Nov 05 j 01:42	0°♏				-800 Jan 07 j 23:13	30°♏	
	-806 Dec 18 j 23:56	0°♏		direct		-800 Jan 16 j 12:12	29°♏32'02	
	-805 Jan 30 j 23:46	0°♏				-800 Jan 25 j 07:39	0°♏	
desc. node	-805 Feb 08 j 01:05	5°♏40'19				-800 Apr 15 j 09:30	0°♏	
	-805 Mar 14 j 13:11	0°♏				-800 Jun 07 j 09:05	0°♏	
	-805 Apr 27 j 00:53	0°♏				-800 Jul 24 j 22:34	0°♏	
	-805 Jun 15 j 14:30	0°♏				-800 Sep 07 j 00:08	0°♏	
retrograde	-805 Aug 05 j 03:29	14°♏59'48		desc. node		-800 Sep 29 j 21:44	16°♏23'41	
min. Earth dist.	-805 Sep 01 j 08:24	10°♏01'35	0.43285 AU	evening set		-800 Oct 08 j 11:33	22°♏40'01	
greatest brilliancy	-805 Sep 07 j 11:49	8°♏00'12	-2.5m			-800 Oct 18 j 09:17	0°♏	
opposition	-805 Sep 09 j 03:07	7°♏27'33	-4°-44'-11	max. Earth dist.		-800 Oct 29 j 11:26	8°♏18'31	2.40741 AU
direct	-805 Oct 10 j 18:43	1°♏17'56				-800 Nov 26 j 20:24	0°♏	
asc. node	-805 Dec 09 j 22:28	18°♏48'45						
	-805 Dec 31 j 21:48	0°♏		conjunction		-800 Dec 05 j 08:51	6°♏36'38	0°-41'-29
	-804 Feb 22 j 11:47	0°♏		minimum elong		-800 Dec 05 j 06:19	6°♏31'42	0°41'29
	-804 Apr 12 j 06:34	0°♏				-799 Jan 04 j 05:18	0°♏	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 11

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

morning rise	-799 Feb 10 j 00:20	28°☾55'53		min. Earth dist.	-794 Apr 04 j 13:47	25°♊24'33	0.53602 AU
	-799 Feb 11 j 09:07	0°≈		direct	-794 May 06 j 01:50	19°♊06'29	
	-799 Mar 22 j 05:15	0°✕		desc. node	-794 May 22 j 18:44	20°♊54'12	
	-799 May 01 j 13:57	0°♊			-794 Jun 19 j 01:53	0°♊	
	-799 Jun 13 j 06:48	0°♋			-794 Aug 11 j 01:09	0°♌	
	-799 Jul 29 j 09:30	0°♍			-794 Sep 22 j 17:41	0°♎	
asc. node	-799 Jul 31 j 19:43	1°♍29'54			-794 Nov 01 j 14:40	0°♏	
	-799 Sep 20 j 00:28	0°♐			-794 Dec 10 j 22:21	0°≈	
retrograde	-799 Dec 01 j 18:34	22°♐50'26			-793 Jan 19 j 23:34	0°♋	
opposition	-798 Jan 10 j 16:18	13°♐15'45	4°28'16		-793 Mar 02 j 13:10	0°♊	
greatest brilliancy	-798 Jan 10 j 18:32	13°♐13'32	-1.2m	asc. node	-793 Mar 23 j 15:59	14°♊44'54	
min. Earth dist.	-798 Jan 11 j 12:12	12°♐55'56	0.67528 AU	evening set	-793 Apr 12 j 02:56	28°♊03'40	
direct	-798 Feb 20 j 15:35	3°♐22'16			-793 Apr 14 j 23:43	0°♋	
	-798 May 13 j 01:33	0°♌			-793 May 30 j 05:12	0°♍	
	-798 Jul 03 j 20:22	0°♎					
desc. node	-798 Aug 17 j 21:11	29°♎49'58		conjunction	-793 Jun 02 j 17:24	2°♍17'11	0°39'00
	-798 Aug 18 j 02:58	0°♏		minimum elong	-793 Jun 02 j 16:04	2°♍15'00	0°39'01
	-798 Sep 28 j 18:33	0°♐		max. Earth dist.	-793 Jun 16 j 12:15	11°♍13'15	2.64283 AU
	-798 Nov 07 j 03:55	0°♑			-793 Jul 15 j 18:58	0°♐	
evening set	-798 Dec 09 j 18:44	25°♑34'32		morning rise	-793 Jul 20 j 10:35	2°♐57'44	
	-798 Dec 15 j 09:13	0°♒			-793 Sep 01 j 04:02	0°♌	
	-797 Jan 22 j 10:47	0°≈			-793 Oct 19 j 02:35	0°♍	
					-793 Dec 07 j 02:07	0°♎	
conjunction	-797 Feb 14 j 18:36	18°≈07'49	-1°-1'-45		-792 Jan 28 j 08:52	0°♏	
minimum elong	-797 Feb 14 j 20:38	18°≈11'44	1°01'47	desc. node	-792 Apr 08 j 18:05	28°♏28'36	
	-797 Mar 02 j 06:53	0°✕		retrograde	-792 Apr 22 j 21:21	29°♏40'21	
max. Earth dist.	-797 Apr 06 j 16:48	26°✕23'04	2.43061 AU	opposition	-792 May 24 j 09:57	24°♏08'50	-2°-52'-41
	-797 Apr 11 j 16:03	0°♊		greatest brilliancy	-792 May 25 j 07:55	23°♏52'40	-2.6m
morning rise	-797 Apr 21 j 17:28	7°♊15'06		min. Earth dist.	-792 May 30 j 20:34	22°♏15'50	0.40817 AU
	-797 May 24 j 03:38	0°♋		direct	-792 Jun 26 j 21:42	17°♏44'19	
asc. node	-797 Jun 18 j 17:59	17°♋17'50			-792 Aug 11 j 11:23	0°♎	
	-797 Jul 08 j 02:40	0°♌			-792 Oct 01 j 10:34	0°♏	
	-797 Aug 25 j 01:43	0°♍			-792 Nov 14 j 03:38	0°≈	
	-797 Oct 17 j 06:58	0°♎			-792 Dec 26 j 22:43	0°♋	
retrograde	-796 Jan 07 j 06:21	26°♎47'50		asc. node	-791 Feb 07 j 14:45	29°♋23'52	
opposition	-796 Feb 14 j 20:31	17°♎58'19	4°30'50		-791 Feb 08 j 12:01	0°♊	
greatest brilliancy	-796 Feb 15 j 19:06	17°♎36'26	-1.4m		-791 Mar 25 j 09:18	0°♋	
min. Earth dist.	-796 Feb 19 j 13:27	16°♎08'59	0.63677 AU		-791 May 10 j 13:31	0°♌	
direct	-796 Mar 27 j 04:01	7°♎58'50		evening set	-791 May 24 j 09:29	8°♌52'08	
	-796 Jun 05 j 01:37	0°♏			-791 Jun 26 j 12:34	0°♍	
desc. node	-796 Jul 04 j 20:16	16°♏56'14		max. Earth dist.	-791 Jul 09 j 06:29	8°♏07'02	2.67372 AU
	-796 Jul 25 j 10:06	0°♐					
	-796 Sep 06 j 13:27	0°♑		conjunction	-791 Jul 10 j 15:05	8°♏58'56	1°06'08
	-796 Oct 16 j 12:04	0°♒		minimum elong	-791 Jul 10 j 14:19	8°♏57'44	1°06'08
	-796 Nov 24 j 00:15	0°♓			-791 Aug 12 j 13:22	0°♌	
	-795 Jan 01 j 08:09	0°≈		morning rise	-791 Aug 24 j 13:27	7°♌41'50	
	-795 Feb 09 j 12:01	0°✕			-791 Sep 28 j 01:48	0°♍	
evening set	-795 Feb 16 j 04:41	5°✕01'18			-791 Nov 12 j 19:22	0°♎	
	-795 Mar 22 j 05:48	0°♊			-791 Dec 27 j 20:01	0°♏	
					-790 Feb 10 j 12:50	0°♎	
conjunction	-795 Apr 17 j 04:56	18°♊23'47	0°-11'-12	desc. node	-790 Feb 24 j 17:48	9°♎29'54	
minimum elong	-795 Apr 17 j 05:36	18°♊24'56	0°11'12		-790 Mar 27 j 21:59	0°♏	
behind sun begin	-795 Apr 16 j 12:32	17°♊55'10			-790 May 17 j 05:52	0°≈	
behind sun end	-795 Apr 17 j 22:40	18°♊54'41		retrograde	-790 Jul 11 j 10:13	16°≈54'14	
	-795 May 03 j 23:45	0°♋		min. Earth dist.	-790 Aug 07 j 01:27	12°≈27'36	0.39229 AU
asc. node	-795 May 05 j 16:25	1°♋09'33		greatest brilliancy	-790 Aug 11 j 06:37	11°≈14'38	-2.7m
max. Earth dist.	-795 May 19 j 14:15	10°♋35'49	2.55844 AU	opposition	-790 Aug 12 j 17:40	10°≈49'09	-6°-29'-17
morning rise	-795 Jun 10 j 15:15	25°♋16'46		direct	-790 Sep 11 j 18:32	5°≈32'38	
	-795 Jun 17 j 19:43	0°♌			-790 Nov 23 j 07:05	0°♋	
	-795 Aug 03 j 13:57	0°♍		asc. node	-790 Dec 26 j 13:29	18°♋52'51	
	-795 Sep 21 j 07:28	0°♎			-789 Jan 14 j 02:14	0°♊	
	-795 Nov 12 j 08:45	0°♏			-789 Mar 03 j 19:40	0°♋	
	-794 Jan 17 j 03:51	0°♐			-789 Apr 21 j 01:43	0°♌	
retrograde	-794 Feb 19 j 15:37	5°♐50'40			-789 Jun 08 j 01:53	0°♍	
	-794 Mar 22 j 17:25	30°♐♊		evening set	-789 Jul 01 j 16:20	14°♏53'33	
opposition	-794 Mar 27 j 13:27	28°♐17'42	2°39'28		-789 Jul 25 j 08:51	0°♌	
greatest brilliancy	-794 Mar 28 j 17:41	27°♐52'13	-1.9m	max. Earth dist.	-789 Aug 02 j 01:29	4°♌56'54	2.65023 AU

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 12

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

conjunction	-789 Aug 16 j 14:48	14°♏22'49	1°07'02	asc. node	-784 Aug 17 j 10:10	5°♐43'43	
minimum elong	-789 Aug 16 j 15:27	14°♏23'52	1°07'01		-784 Oct 05 j 03:31	0°♑	
	-789 Sep 09 j 09:32	0°♒		retrograde	-784 Nov 18 j 09:17	10°♑03'37	
morning rise	-789 Sep 30 j 22:09	14°♒23'26		opposition	-784 Dec 28 j 12:15	0°♑17'26	4°05'39
	-789 Oct 23 j 20:14	0°♓		greatest brilliancy	-784 Dec 28 j 07:24	0°♑22'17	-1.2m
	-789 Dec 05 j 16:47	0°♓		min. Earth dist.	-784 Dec 27 j 19:56	0°♑33'46	0.67246 AU
desc. node	-788 Jan 12 j 16:08	27°♓25'15			-784 Dec 29 j 05:41	30°♒♐	
	-788 Jan 16 j 04:43	0°♑		direct	-783 Feb 06 j 22:35	20°♐34'32	
	-788 Feb 25 j 18:41	0°♒			-783 Mar 22 j 21:49	0°♑	
	-788 Apr 06 j 05:13	0°♓			-783 May 23 j 16:02	0°♏	
	-788 May 18 j 00:44	0°♐			-783 Jul 12 j 03:54	0°♒	
	-788 Jul 04 j 05:56	0°♑			-783 Aug 25 j 19:36	0°♓	
retrograde	-788 Sep 04 j 13:26	20°♑54'53		desc. node	-783 Sep 03 j 13:41	6°♓10'08	
min. Earth dist.	-788 Oct 04 j 18:44	14°♑39'09	0.51133 AU		-783 Oct 06 j 07:30	0°♓	
opposition	-788 Oct 12 j 11:23	11°♑46'51	-1°-31'-28	evening set	-783 Nov 13 j 06:25	28°♓53'21	
greatest brilliancy	-788 Oct 11 j 20:27	12°♑00'47	-2.1m		-783 Nov 14 j 16:48	0°♑	
asc. node	-788 Nov 12 j 12:56	4°♑21'49			-783 Dec 22 j 22:48	0°♒	
direct	-788 Nov 15 j 22:34	4°♑17'16					
	-787 Feb 02 j 12:01	0°♐		conjunction	-782 Jan 17 j 02:16	19°♒50'48	-1°-4'-59
	-787 Mar 29 j 03:50	0°♐		minimum elong	-782 Jan 17 j 01:23	19°♒49'04	1°05'01
	-787 May 18 j 15:50	0°♑			-782 Jan 30 j 00:21	0°♓	
	-787 Jul 05 j 22:05	0°♏		max. Earth dist.	-782 Feb 24 j 10:51	19°♓46'38	2.38219 AU
evening set	-787 Aug 07 j 18:53	21°♏13'41			-782 Mar 09 j 19:14	0°♐	
	-787 Aug 21 j 01:06	0°♒		morning rise	-782 Mar 27 j 09:50	13°♐16'34	
max. Earth dist.	-787 Aug 27 j 14:52	4°♒23'48	2.57488 AU		-782 Apr 19 j 02:35	0°♑	
					-782 May 31 j 13:39	0°♐	
conjunction	-787 Sep 24 j 09:38	23°♒20'15	0°39'11	asc. node	-782 Jul 05 j 10:08	23°♐19'09	
minimum elong	-787 Sep 24 j 10:59	23°♒22'35	0°39'11		-782 Jul 15 j 18:13	0°♐	
	-787 Oct 03 j 23:19	0°♓			-782 Sep 02 j 17:53	0°♑	
morning rise	-787 Nov 13 j 04:09	28°♓46'26			-782 Oct 30 j 20:36	0°♏	
	-787 Nov 14 j 20:22	0°♓		retrograde	-782 Dec 23 j 13:09	13°♏30'57	
desc. node	-787 Nov 29 j 16:01	10°♓55'46		opposition	-781 Jan 31 j 19:07	4°♏20'56	4°40'08
	-787 Dec 25 j 01:47	0°♑		greatest brilliancy	-781 Feb 01 j 09:57	4°♏06'22	-1.3m
	-786 Feb 02 j 05:45	0°♒		min. Earth dist.	-781 Feb 04 j 00:00	3°♏05'26	0.65964 AU
	-786 Mar 13 j 02:15	0°♓			-781 Feb 12 j 04:39	30°♒♑	
	-786 Apr 21 j 14:13	0°♐		direct	-781 Mar 14 j 04:10	24°♑19'30	
	-786 Jun 02 j 00:30	0°♑			-781 Apr 15 j 17:11	0°♏	
	-786 Jul 17 j 17:09	0°♐			-781 Jun 18 j 03:45	0°♒	
	-786 Sep 17 j 10:54	0°♐		desc. node	-781 Jul 22 j 12:12	21°♒18'21	
asc. node	-786 Sep 30 j 11:35	3°♐14'20			-781 Aug 04 j 13:31	0°♓	
retrograde	-786 Oct 15 j 05:43	4°♐38'18			-781 Sep 15 j 21:33	0°♓	
	-786 Nov 10 j 04:55	30°♒♐			-781 Oct 25 j 12:44	0°♑	
min. Earth dist.	-786 Nov 19 j 14:50	26°♐28'58	0.62041 AU		-781 Dec 02 j 20:53	0°♒	
opposition	-786 Nov 24 j 02:35	24°♐41'33	2°10'20		-780 Jan 10 j 01:07	0°♓	
greatest brilliancy	-786 Nov 23 j 13:39	24°♐54'27	-1.5m	evening set	-780 Jan 22 j 03:42	9°♓24'57	
direct	-785 Jan 01 j 06:04	15°♐45'16			-780 Feb 18 j 00:42	0°♐	
	-785 Feb 26 j 01:00	0°♐					
	-785 Apr 26 j 11:40	0°♑		conjunction	-780 Mar 26 j 02:38	27°♐29'25	0°-33'-57
	-785 Jun 16 j 08:14	0°♏		minimum elong	-780 Mar 26 j 04:47	27°♐33'17	0°33'57
	-785 Aug 02 j 06:52	0°♒			-780 Mar 29 j 13:49	0°♑	
	-785 Sep 15 j 05:16	0°♓		max. Earth dist.	-780 May 05 j 18:49	26°♑17'58	2.51204 AU
evening set	-785 Sep 19 j 18:56	3°♓13'41			-780 May 11 j 03:41	0°♐	
max. Earth dist.	-785 Oct 04 j 15:27	13°♓51'37	2.45719 AU	asc. node	-780 May 22 j 09:24	7°♐40'07	
desc. node	-785 Oct 17 j 15:31	23°♓19'58		morning rise	-780 May 23 j 15:55	8°♐31'48	
	-785 Oct 26 j 16:12	0°♓			-780 Jun 24 j 22:33	0°♐	
					-780 Aug 10 j 23:13	0°♑	
conjunction	-785 Nov 12 j 13:04	12°♓38'16	0°-16'-56		-780 Sep 29 j 18:30	0°♏	
minimum elong	-785 Nov 12 j 12:01	12°♓36'17	0°16'57		-780 Nov 24 j 20:20	0°♒	
	-785 Dec 05 j 06:45	0°♑		retrograde	-779 Jan 31 j 20:56	19°♒46'45	
morning rise	-784 Jan 12 j 17:05	29°♑55'59		opposition	-779 Mar 10 j 01:10	11°♒38'42	3°41'13
	-784 Jan 12 j 19:08	0°♒		greatest brilliancy	-779 Mar 11 j 07:31	11°♒10'16	-1.6m
greatest brilliancy	-784 Jan 31 j 22:08	15°♒00'52	1.2m	min. Earth dist.	-779 Mar 16 j 22:53	9°♒03'46	0.58204 AU
	-784 Feb 20 j 01:27	0°♓		direct	-779 Apr 19 j 14:59	1°♒58'27	
	-784 Mar 29 j 23:04	0°♐		desc. node	-779 Jun 08 j 11:35	15°♒02'35	
	-784 May 09 j 09:51	0°♑			-779 Jul 06 j 23:51	0°♓	
	-784 Jun 21 j 09:43	0°♐			-779 Aug 22 j 08:24	0°♓	
	-784 Aug 07 j 14:49	0°♐			-779 Oct 02 j 10:06	0°♑	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 13

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-779 Nov 10 j 12:42	0°☾				-774 Sep 16 j 08:00	0°♊		
	-779 Dec 19 j 07:34	0°♊				-774 Oct 31 j 04:18	0°♈		
	-778 Jan 27 j 21:40	0°♋				-774 Dec 13 j 16:30	0°♌		
	-778 Mar 10 j 01:23	0°♍				-773 Jan 25 j 01:10	0°♎		
evening set	-778 Mar 23 j 13:33	9°♏33'19		desc. node		-773 Jan 29 j 09:55	3°♏07'36		
asc. node	-778 Apr 09 j 07:33	21°♏12'24				-773 Mar 07 j 17:03	0°☾		
	-778 Apr 22 j 03:38	0°♐				-773 Apr 18 j 15:24	0°♊		
						-773 Jun 02 j 12:52	0°♋		
conjunction	-778 May 16 j 22:02	16°♌39'17	0°21'52	retrograde		-773 Aug 17 j 09:01	29°♌24'26		
minimum elong	-778 May 16 j 21:04	16°♌37'40	0°21'52	min. Earth dist.		-773 Sep 14 j 12:37	24°♌00'14	0.46007 AU	
max. Earth dist.	-778 Jun 06 j 11:09	0°♍12'03	2.61604 AU	greatest brilliancy		-773 Sep 21 j 06:35	21°♌39'06	-2.3m	
	-778 Jun 06 j 03:46	0°♍		opposition		-773 Sep 22 j 15:26	21°♌10'20	-3°-31'-43	
morning rise	-778 Jul 05 j 16:32	19°♍07'37		direct		-773 Oct 25 j 06:28	14°♌30'14		
	-778 Jul 22 j 17:05	0°☾		asc. node		-773 Nov 30 j 03:56	21°♌36'16		
	-778 Sep 08 j 10:32	0°♌				-773 Dec 20 j 17:13	0°♏		
	-778 Oct 27 j 10:25	0°♎				-772 Feb 15 j 18:57	0°♐		
	-778 Dec 18 j 05:34	0°♈				-772 Apr 06 j 20:44	0°♍		
	-777 Feb 21 j 00:53	0°♌				-772 May 26 j 02:42	0°☾		
retrograde	-777 Mar 27 j 02:17	6°♌06'13				-772 Jul 12 j 21:31	0°♌		
desc. node	-777 Apr 26 j 10:12	0°♌40'58		evening set		-772 Jul 23 j 17:29	6°♌56'55		
	-777 Apr 28 j 13:18	30°♌43'32		max. Earth dist.		-772 Aug 16 j 16:07	22°♌32'36	2.61039 AU	
opposition	-777 Apr 29 j 09:33	29°♌43'32	0°-10'-21			-772 Aug 27 j 22:31	0°♎		
greatest brilliancy	-777 Feb 12 j 17:43	27°♌05'32	-3.0m						
min. Earth dist.	-777 May 07 j 15:46	27°♌02'09	0.45557 AU	conjunction		-772 Sep 08 j 06:07	7°♎34'30	0°53'34	
direct	-777 Jun 04 j 21:16	21°♌57'13		minimum elong		-772 Sep 08 j 07:24	7°♎36'40	0°53'33	
	-777 Jul 11 j 01:14	0°♌				-772 Oct 11 j 00:33	0°♈		
	-777 Sep 02 j 22:18	0°♎		morning rise		-772 Oct 25 j 14:40	10°♈13'36		
	-777 Oct 15 j 22:05	0°☾				-772 Nov 22 j 05:28	0°♌		
	-777 Nov 25 j 22:39	0°♊		desc. node		-772 Dec 16 j 08:33	17°♌41'39		
	-776 Jan 06 j 04:54	0°♋				-771 Jan 01 j 20:44	0°♎		
	-776 Feb 17 j 17:17	0°♏				-771 Feb 10 j 11:01	0°☾		
asc. node	-776 Feb 25 j 06:46	5°♏13'11				-771 Mar 21 j 17:43	0°♊		
	-776 Apr 01 j 21:13	0°♐				-771 Apr 30 j 17:51	0°♋		
evening set	-776 May 08 j 11:04	24°♐04'18				-771 Jun 12 j 03:56	0°♏		
	-776 May 17 j 14:19	0°♍				-771 Jul 31 j 07:59	0°♐		
				retrograde		-771 Sep 30 j 11:50	19°♐17'47		
conjunction	-776 Jun 25 j 23:30	25°♍18'15	0°58'37	asc. node		-771 Oct 17 j 02:58	17°♐19'14		
minimum elong	-776 Jun 25 j 22:20	25°♍16'23	0°58'38	min. Earth dist.		-771 Nov 02 j 23:01	11°♐48'37	0.58326 AU	
max. Earth dist.	-776 Jun 30 j 04:02	27°♍58'42	2.66819 AU	opposition		-771 Nov 08 j 20:44	9°♐29'18	0°59'22	
	-776 Jul 03 j 08:05	0°☾		greatest brilliancy		-771 Nov 08 j 12:29	9°♐37'25	-1.7m	
morning rise	-776 Aug 10 j 14:37	24°☾22'44		direct		-771 Dec 15 j 18:05	1°♐00'52		
	-776 Aug 19 j 10:18	0°♌				-770 Mar 12 j 03:01	0°♍		
	-776 Oct 05 j 08:28	0°♎				-770 May 05 j 08:07	0°☾		
	-776 Nov 20 j 23:24	0°♈				-770 Jun 23 j 21:09	0°♌		
	-775 Jan 06 j 15:44	0°♌				-770 Aug 09 j 09:56	0°♎		
	-775 Feb 23 j 11:21	0°♎		evening set		-770 Sep 02 j 02:26	15°♎58'47		
desc. node	-775 Mar 13 j 09:52	10°♎44'23		max. Earth dist.		-770 Sep 17 j 10:08	26°♎34'53	2.50686 AU	
	-775 Apr 17 j 21:50	0°☾				-770 Sep 22 j 07:11	0°♈		
retrograde	-775 Jun 11 j 17:09	15°☾43'03							
min. Earth dist.	-775 Jul 11 j 05:59	10°☾52'50	0.37501 AU	conjunction		-770 Oct 22 j 17:56	21°♈49'05	0°07'30	
opposition	-775 Jul 12 j 04:58	10°☾37'30	-6°-37'-30	minimum elong		-770 Oct 22 j 18:19	21°♈49'48	0°07'29	
greatest brilliancy	-775 Jul 11 j 22:58	10°☾41'31	-2.9m	behind sun begin		-770 Oct 21 j 22:12	21°♈13'08		
direct	-775 Aug 11 j 00:01	5°☾40'20		behind sun end		-770 Oct 23 j 14:27	22°♈26'30		
	-775 Oct 20 j 08:25	0°♊				-770 Nov 02 j 21:21	0°♌		
	-775 Dec 08 j 23:28	0°♋		desc. node		-770 Nov 03 j 07:25	0°♌18'36		
asc. node	-774 Jan 12 j 05:43	21°♋58'38				-770 Dec 12 j 16:52	0°♎		
	-774 Jan 24 j 16:03	0°♏		morning rise		-770 Dec 17 j 11:19	3°♎39'39		
	-774 Mar 12 j 07:54	0°♐				-769 Jan 20 j 10:22	0°☾		
	-774 Apr 28 j 13:04	0°♍				-769 Feb 27 j 21:03	0°♊		
	-774 Jun 15 j 00:52	0°☾				-769 Apr 07 j 22:16	0°♋		
evening set	-774 Jun 17 j 01:13	1°☾16'28				-769 May 18 j 14:07	0°♏		
max. Earth dist.	-774 Jul 23 j 18:09	24°☾36'30	2.66604 AU			-769 Jul 01 j 03:27	0°♐		
	-774 Aug 01 j 04:04	0°♌				-769 Aug 19 j 10:22	0°♍		
				asc. node		-769 Sep 04 j 03:05	8°♍13'18		
conjunction	-774 Aug 02 j 03:36	0°♌37'46	1°09'55	retrograde		-769 Nov 05 j 23:59	26°♍57'56		
minimum elong	-774 Aug 02 j 03:42	0°♌37'56	1°09'55	min. Earth dist.		-769 Dec 13 j 23:24	17°♍56'24	0.65948 AU	
morning rise	-774 Sep 15 j 21:53	29°♌43'21		opposition		-769 Dec 16 j 03:48	17°♍03'51	3°31'19	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 14

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

greatest brilliancy	-769 Dec 15 j 17:30	17° Π 14'11	-1.3m			-763 Mar 17 j 11:12	0° Υ	
direct	-768 Jan 24 j 20:01	7° Π 35'39		asc. node		-763 Apr 25 j 23:51	27° Υ 44'33	
	-768 Apr 07 j 17:13	0° \mathfrak{S}						
	-768 Jun 01 j 19:27	0° Ω		conjunction		-763 Apr 28 j 12:56	29° Υ 29'16	0°01'34
	-768 Jul 19 j 23:37	0° \mathfrak{M}		minimum elong		-763 Apr 28 j 12:51	29° Υ 29'06	0°01'34
	-768 Sep 02 j 06:13	0° $\underline{\mathfrak{A}}$		behind sun begin		-763 Apr 27 j 14:08	28° Υ 50'14	
desc. node	-768 Sep 20 j 06:10	12° $\underline{\mathfrak{A}}$ 48'52		behind sun end		-763 Apr 29 j 11:33	0° \mathfrak{B} 07'57	
	-768 Oct 13 j 16:43	0° \mathfrak{M}				-763 Apr 29 j 06:55	0° \mathfrak{B}	
evening set	-768 Oct 20 j 14:50	5° \mathfrak{M} 10'33		max. Earth dist.		-763 May 26 j 10:46	18° \mathfrak{B} 19'29	2.58106 AU
max. Earth dist.	-768 Nov 21 j 03:58	29° \mathfrak{M} 15'03	2.38431 AU			-763 Jun 13 j 03:04	0° Π	
	-768 Nov 22 j 03:11	0° \mathfrak{A}		morning rise		-763 Jun 20 j 01:49	4° Π 32'21	
						-763 Jul 29 j 18:05	0° \mathfrak{S}	
conjunction	-768 Dec 20 j 02:05	21° \mathfrak{A} 50'24	0°-53'-10			-763 Sep 16 j 00:34	0° Ω	
minimum elong	-768 Dec 19 j 23:21	21° \mathfrak{A} 45'00	0°53'10			-763 Nov 05 j 15:37	0° \mathfrak{M}	
	-768 Dec 30 j 10:49	0° \mathfrak{B}				-762 Jan 02 j 05:05	0° $\underline{\mathfrak{A}}$	
	-767 Feb 06 j 13:22	0° \approx		retrograde		-762 Mar 03 j 11:48	16° $\underline{\mathfrak{A}}$ 17'06	
morning rise	-767 Feb 26 j 20:59	15° \approx 49'21		opposition		-762 Apr 07 j 12:38	9° $\underline{\mathfrak{A}}$ 06'59	1°49'16
	-767 Mar 17 j 08:14	0° \mathfrak{H}		greatest brilliancy		-762 Apr 08 j 10:40	8° $\underline{\mathfrak{A}}$ 47'38	-2.0m
	-767 Apr 26 j 15:22	0° Υ		min. Earth dist.		-762 Apr 15 j 21:55	6° $\underline{\mathfrak{A}}$ 10'40	0.50788 AU
	-767 Jun 08 j 04:29	0° \mathfrak{B}		desc. node		-762 May 13 j 03:25	0° $\underline{\mathfrak{A}}$ 23'13	
asc. node	-767 Jul 22 j 01:56	28° \mathfrak{B} 54'02		direct		-762 May 16 j 04:33	0° $\underline{\mathfrak{A}}$ 19'21	
	-767 Jul 23 j 19:46	0° Π				-762 Aug 02 j 11:42	0° \mathfrak{M}	
	-767 Sep 12 j 14:20	0° \mathfrak{S}				-762 Sep 16 j 00:29	0° \mathfrak{A}	
	-767 Nov 29 j 10:10	0° Ω				-762 Oct 26 j 14:39	0° \mathfrak{B}	
retrograde	-767 Dec 09 j 14:15	0° Ω 37'31				-762 Dec 05 j 08:43	0° \approx	
	-767 Dec 19 j 10:49	30° \mathfrak{R} \mathfrak{S}				-761 Jan 14 j 17:30	0° \mathfrak{H}	
opposition	-766 Jan 18 j 07:28	21° \mathfrak{S} 10'53	4°36'06			-761 Feb 25 j 13:16	0° Υ	
greatest brilliancy	-766 Jan 18 j 14:07	21° \mathfrak{S} 04'17	-1.2m	asc. node		-761 Mar 13 j 21:50	11° Υ 23'44	
min. Earth dist.	-766 Jan 19 j 23:53	20° \mathfrak{S} 30'48	0.67245 AU			-761 Apr 10 j 04:35	0° \mathfrak{B}	
direct	-766 Feb 28 j 11:35	11° \mathfrak{S} 13'19		evening set		-761 Apr 22 j 11:38	8° \mathfrak{B} 14'05	
	-766 May 04 j 18:54	0° Ω				-761 May 25 j 13:09	0° Π	
	-766 Jun 28 j 00:52	0° \mathfrak{M}						
desc. node	-766 Aug 08 j 04:43	26° \mathfrak{M} 44'28		conjunction		-761 Jun 11 j 19:21	11° Π 11'04	0°47'18
	-766 Aug 12 j 22:50	0° $\underline{\mathfrak{A}}$		minimum elong		-761 Jun 11 j 17:58	11° Π 08'51	0°47'18
	-766 Sep 23 j 20:11	0° \mathfrak{M}		max. Earth dist.		-761 Jun 22 j 01:10	17° Π 46'34	2.65430 AU
	-766 Nov 02 j 07:39	0° \mathfrak{A}				-761 Jul 11 j 03:28	0° \mathfrak{S}	
	-766 Dec 10 j 13:50	0° \mathfrak{B}		morning rise		-761 Jul 28 j 14:48	11° \mathfrak{S} 07'28	
evening set	-766 Dec 25 j 09:38	11° \mathfrak{B} 42'19				-761 Aug 27 j 09:14	0° Ω	
	-765 Jan 17 j 15:53	0° \approx				-761 Oct 13 j 21:18	0° \mathfrak{M}	
	-765 Feb 25 j 12:17	0° \mathfrak{H}				-761 Nov 30 j 19:51	0° $\underline{\mathfrak{A}}$	
						-760 Jan 19 j 08:22	0° \mathfrak{M}	
conjunction	-765 Mar 02 j 02:15	3° \mathfrak{H} 28'16	0°-53'-55			-760 Mar 15 j 06:27	0° \mathfrak{A}	
minimum elong	-765 Mar 02 j 05:00	3° \mathfrak{H} 33'29	0°53'56	desc. node		-760 Mar 30 j 02:35	6° \mathfrak{A} 19'26	
	-765 Apr 06 j 21:40	0° Υ		retrograde		-760 May 10 j 10:24	15° \mathfrak{A} 20'09	
max. Earth dist.	-765 Apr 19 j 12:54	9° Υ 05'37	2.46011 AU	opposition		-760 Jun 10 j 00:10	10° \mathfrak{A} 11'13	-4°-31'-35
morning rise	-765 May 04 j 10:42	19° Υ 38'29		greatest brilliancy		-760 Jun 10 j 21:29	9° \mathfrak{A} 56'30	-2.8m
	-765 May 19 j 08:43	0° \mathfrak{B}		min. Earth dist.		-760 Jun 14 j 10:33	8° \mathfrak{A} 57'53	0.38887 AU
asc. node	-765 Jun 09 j 00:32	14° \mathfrak{B} 01'53		direct		-760 Jul 11 j 20:20	4° \mathfrak{A} 30'18	
	-765 Jul 03 j 04:31	0° Π				-760 Sep 20 j 08:31	0° \mathfrak{B}	
	-765 Aug 19 j 16:27	0° \mathfrak{S}				-760 Nov 06 j 09:24	0° \approx	
	-765 Oct 10 j 05:41	0° Ω				-760 Dec 20 j 14:03	0° \mathfrak{H}	
	-765 Dec 15 j 20:25	0° \mathfrak{M}		asc. node		-759 Jan 28 j 20:25	26° \mathfrak{H} 35'58	
retrograde	-764 Jan 16 j 04:00	5° \mathfrak{M} 10'19				-759 Feb 02 j 22:07	0° Υ	
	-764 Feb 13 j 23:20	30° \mathfrak{R} Ω				-759 Mar 20 j 07:03	0° \mathfrak{B}	
opposition	-764 Feb 23 j 07:43	26° Ω 34'16	4°18'03			-759 May 05 j 18:28	0° Π	
greatest brilliancy	-764 Feb 24 j 10:01	26° Ω 09'01	-1.5m	evening set		-759 Jun 02 j 04:42	17° Π 29'07	
min. Earth dist.	-764 Feb 28 j 20:34	24° Ω 26'56	0.61968 AU			-759 Jun 21 j 21:14	0° \mathfrak{S}	
direct	-764 Apr 04 j 11:27	16° Ω 38'55		max. Earth dist.		-759 Jul 14 j 13:29	14° \mathfrak{S} 25'30	2.67335 AU
	-764 May 25 j 22:41	0° \mathfrak{M}						
desc. node	-764 Jun 25 j 03:23	15° \mathfrak{M} 33'49		conjunction		-759 Jul 18 j 21:22	17° \mathfrak{S} 11'02	1°08'42
	-764 Jul 18 j 22:52	0° $\underline{\mathfrak{A}}$		minimum elong		-759 Jul 18 j 20:55	17° \mathfrak{S} 10'18	1°08'42
	-764 Aug 31 j 22:31	0° \mathfrak{M}				-759 Aug 07 j 22:35	0° Ω	
	-764 Oct 11 j 04:58	0° \mathfrak{A}		morning rise		-759 Sep 01 j 14:46	15° Ω 53'20	
	-764 Nov 18 j 21:24	0° \mathfrak{B}				-759 Sep 23 j 07:32	0° \mathfrak{M}	
	-764 Dec 27 j 08:28	0° \approx				-759 Nov 07 j 16:35	0° $\underline{\mathfrak{A}}$	
	-763 Feb 04 j 14:59	0° \mathfrak{H}				-759 Dec 22 j 02:06	0° \mathfrak{M}	
evening set	-763 Mar 01 j 17:14	18° \mathfrak{H} 35'35				-758 Feb 03 j 17:59	0° \mathfrak{A}	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 15

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

desc. node	-758 Feb 15 j 01:33	7°♂48'47		direct	-753 Jan 10 j 02:27	24°♂11'26	
	-758 Mar 19 j 07:26	0°♂			-753 Feb 12 j 11:38	0°♂	
	-758 May 03 j 16:17	0°♂			-753 Apr 20 j 01:38	0°♂	
	-758 Jul 02 j 11:56	0°♂			-753 Jun 11 j 02:45	0°♂	
retrograde	-758 Jul 25 j 21:51	3°♂40'55			-753 Jul 28 j 10:58	0°♂	
	-758 Aug 18 j 06:39	30°♂			-753 Sep 10 j 12:23	0°♂	
min. Earth dist.	-758 Aug 21 j 15:15	29°♂00'35	0.41266 AU	evening set	-753 Sep 30 j 16:58	14°♂24'10	
greatest brilliancy	-758 Aug 27 j 01:47	27°♂18'54	-2.6m	desc. node	-753 Oct 07 j 22:19	19°♂39'09	
opposition	-758 Aug 28 j 18:03	26°♂47'12	-5°-36'-11	max. Earth dist.	-753 Oct 17 j 15:58	26°♂48'13	2.42913 AU
direct	-758 Sep 28 j 15:17	21°♂02'43			-753 Oct 21 j 23:32	0°♂	
	-758 Nov 07 j 20:48	0°♂					
asc. node	-758 Dec 16 j 20:21	18°♂36'25		conjunction	-753 Nov 25 j 15:11	26°♂13'12	0°-31'-14
	-757 Jan 06 j 07:25	0°♂		minimum elong	-753 Nov 25 j 13:13	26°♂09'25	0°31'15
	-757 Feb 25 j 21:19	0°♂			-753 Nov 30 j 12:54	0°♂	
	-757 Apr 15 j 22:08	0°♂			-752 Jan 07 j 23:37	0°♂	
	-757 Jun 03 j 07:16	0°♂		morning rise	-752 Jan 28 j 23:04	16°♂29'40	
evening set	-757 Jul 10 j 01:12	23°♂09'39			-752 Feb 15 j 04:26	0°♂	
	-757 Jul 20 j 18:13	0°♂			-752 Mar 25 j 00:28	0°♂	
max. Earth dist.	-757 Aug 07 j 16:36	11°♂33'39	2.63830 AU		-752 May 04 j 08:41	0°♂	
					-752 Jun 16 j 02:29	0°♂	
conjunction	-757 Aug 25 j 01:22	22°♂54'19	1°03'22		-752 Aug 01 j 12:16	0°♂	
minimum elong	-757 Aug 25 j 02:19	22°♂55'51	1°03'21	asc. node	-752 Aug 07 j 17:56	3°♂46'50	
	-757 Sep 04 j 19:09	0°♂			-752 Sep 24 j 18:00	0°♂	
morning rise	-757 Oct 09 j 21:26	23°♂39'18		retrograde	-752 Nov 26 j 01:29	17°♂51'15	
	-757 Oct 19 j 02:51	0°♂		opposition	-751 Jan 05 j 02:03	8°♂11'08	4°20'12
	-757 Nov 30 j 17:34	0°♂		greatest brilliancy	-751 Jan 05 j 01:01	8°♂12'10	-1.2m
desc. node	-756 Jan 03 j 00:48	24°♂12'13		min. Earth dist.	-751 Jan 05 j 06:11	8°♂07'01	0.67526 AU
	-756 Jan 10 j 21:22	0°♂			-751 Jan 29 j 20:30	30°♂	
	-756 Feb 20 j 01:21	0°♂		direct	-751 Feb 14 j 19:57	28°♂21'45	
	-756 Mar 30 j 23:21	0°♂			-751 Mar 03 j 18:06	0°♂	
	-756 May 10 j 21:09	0°♂			-751 May 17 j 01:02	0°♂	
	-756 Jun 24 j 10:17	0°♂			-751 Jul 06 j 19:39	0°♂	
	-756 Aug 27 j 12:56	0°♂			-751 Aug 20 j 20:51	0°♂	
retrograde	-756 Sep 14 j 11:31	2°♂09'47		desc. node	-751 Aug 24 j 21:37	2°♂48'59	
	-756 Oct 01 j 17:43	30°♂			-751 Oct 01 j 11:58	0°♂	
min. Earth dist.	-756 Oct 15 j 21:05	25°♂26'19	0.53870 AU		-751 Nov 09 j 21:54	0°♂	
opposition	-756 Oct 23 j 00:43	22°♂42'16	0°-30'-33	evening set	-751 Nov 27 j 22:40	14°♂04'47	
greatest brilliancy	-756 Oct 22 j 19:52	22°♂46'54	-1.9m		-751 Dec 18 j 03:36	0°♂	
asc. node	-756 Nov 02 j 19:26	18°♂51'18			-750 Jan 25 j 04:52	0°♂	
direct	-756 Nov 27 j 10:44	14°♂49'04					
	-755 Jan 23 j 08:48	0°♂		conjunction	-750 Feb 02 j 09:35	6°♂24'37	-1°-5'00
	-755 Mar 22 j 22:18	0°♂		minimum elong	-750 Feb 02 j 10:30	6°♂26'25	1°05'01
	-755 May 13 j 11:17	0°♂			-750 Mar 04 j 23:38	0°♂	
	-755 Jul 01 j 03:23	0°♂		max. Earth dist.	-750 Mar 24 j 06:34	14°♂31'51	2.40724 AU
evening set	-755 Aug 16 j 17:34	0°♂12'37		morning rise	-750 Apr 11 j 04:31	27°♂44'47	
	-755 Aug 16 j 09:58	0°♂			-750 Apr 14 j 06:47	0°♂	
max. Earth dist.	-755 Sep 03 j 16:02	12°♂16'35	2.55247 AU		-750 May 26 j 16:42	0°♂	
	-755 Sep 29 j 08:17	0°♂		asc. node	-750 Jun 25 j 16:33	20°♂12'51	
					-750 Jul 10 j 16:04	0°♂	
conjunction	-755 Oct 04 j 04:52	3°♂24'51	0°28'48		-750 Aug 27 j 22:19	0°♂	
minimum elong	-755 Oct 04 j 06:02	3°♂26'55	0°28'47		-750 Oct 21 j 14:20	0°♂	
	-755 Nov 10 j 03:20	0°♂		retrograde	-750 Dec 31 j 20:21	21°♂29'56	
desc. node	-755 Nov 19 j 23:56	7°♂16'35		opposition	-749 Feb 08 j 18:23	12°♂30'48	4°36'11
morning rise	-755 Nov 24 j 17:31	10°♂47'43		greatest brilliancy	-749 Feb 09 j 13:39	12°♂12'01	-1.3m
	-755 Dec 20 j 05:25	0°♂		min. Earth dist.	-749 Feb 12 j 19:39	10°♂55'59	0.64833 AU
	-754 Jan 28 j 05:22	0°♂		direct	-749 Mar 22 j 03:33	2°♂29'29	
	-754 Mar 07 j 21:43	0°♂			-749 Jun 10 j 21:09	0°♂	
	-754 Apr 16 j 04:24	0°♂		desc. node	-749 Jul 12 j 21:05	18°♂58'38	
	-754 May 27 j 05:04	0°♂			-749 Jul 29 j 20:40	0°♂	
	-754 Jul 10 j 19:05	0°♂			-749 Sep 10 j 16:19	0°♂	
	-754 Sep 02 j 19:06	0°♂			-749 Oct 20 j 12:08	0°♂	
asc. node	-754 Sep 20 j 17:53	7°♂11'21			-749 Nov 27 j 22:25	0°♂	
retrograde	-754 Oct 23 j 08:10	13°♂18'10			-748 Jan 05 j 04:09	0°♂	
min. Earth dist.	-754 Nov 28 j 16:49	4°♂48'39	0.63694 AU	evening set	-748 Feb 06 j 04:05	24°♂39'48	
opposition	-754 Dec 02 j 08:45	3°♂20'36	2°44'19		-748 Feb 13 j 05:02	0°♂	
greatest brilliancy	-754 Dec 01 j 19:37	3°♂33'46	-1.4m		-748 Mar 24 j 19:20	0°♂	
	-754 Dec 11 j 00:02	30°♂					

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 16

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

conjunction	-748 Apr 08 j 00:08	10°Υ09'48	0°-20'-55			-743 Jul 24 j 03:19	30°RΘ	
minimum elong	-748 Apr 08 j 01:26	10°Υ12'07	0°20'54	min. Earth dist.		-743 Jul 26 j 10:50	29°Θ22'38	0.38090 AU
	-748 May 06 j 10:07	0°Ϡ		greatest brilliancy		-743 Jul 29 j 06:23	28°Θ36'17	-2.8m
asc. node	-748 May 12 j 14:29	4°Ϡ13'52		opposition		-743 Jul 30 j 06:45	28°Θ19'31	-6°-49'-48
max. Earth dist.	-748 May 14 j 00:09	5°Ϡ11'15	2.53856 AU	direct		-743 Aug 28 j 21:15	23°Θ18'34	
morning rise	-748 Jun 03 j 04:03	18°Ϡ45'58				-743 Oct 01 j 15:38	0°≈	
	-748 Jun 20 j 04:06	0°Π				-743 Nov 30 j 04:08	0°Ϡ	
	-748 Aug 05 j 23:38	0°Ϡ		asc. node		-742 Jan 02 j 11:51	20°Ϡ13'45	
	-748 Sep 24 j 01:48	0°Ω				-742 Jan 18 j 03:49	0°Υ	
	-748 Nov 16 j 10:07	0°η				-742 Mar 06 j 20:04	0°Ϡ	
retrograde	-747 Feb 11 j 06:26	29°η09'32				-742 Apr 23 j 13:43	0°Π	
opposition	-747 Mar 19 j 18:15	21°η20'01	3°08'51			-742 Jun 10 j 07:58	0°Ϡ	
greatest brilliancy	-747 Mar 21 j 00:18	20°η52'22	-1.8m	evening set		-742 Jun 25 j 10:59	9°Ϡ33'00	
min. Earth dist.	-747 Mar 27 j 07:40	18°η33'27	0.55757 AU			-742 Jul 27 j 13:34	0°Ω	
direct	-747 Apr 28 j 19:41	11°η53'36		max. Earth dist.		-742 Jul 29 j 04:13	1°Ω02'03	2.65830 AU
desc. node	-747 May 29 j 19:33	17°η34'13						
	-747 Jun 27 j 08:17	0°Δ		conjunction		-742 Aug 10 j 09:54	8°Ω55'14	1°08'44
	-747 Aug 15 j 15:17	0°Ϡ		minimum elong		-742 Aug 10 j 10:20	8°Ω55'56	1°08'44
	-747 Sep 26 j 13:09	0°Ϡ				-742 Sep 11 j 16:09	0°η	
	-747 Nov 05 j 01:07	0°Θ		morning rise		-742 Sep 24 j 09:53	8°η27'16	
	-747 Dec 14 j 02:12	0°≈				-742 Oct 26 j 07:45	0°Δ	
	-746 Jan 22 j 21:08	0°Ϡ				-742 Dec 08 j 11:34	0°Ϡ	
	-746 Mar 05 j 04:43	0°Υ		desc. node		-741 Jan 19 j 17:00	0°Ϡ15'05	
asc. node	-746 Mar 30 j 14:16	17°Υ47'32				-741 Jan 19 j 08:41	0°Ϡ	
evening set	-746 Apr 03 j 22:33	20°Υ47'17				-741 Mar 01 j 09:04	0°Θ	
	-746 Apr 17 j 10:06	0°Ϡ				-741 Apr 11 j 08:39	0°≈	
						-741 May 24 j 02:25	0°Ϡ	
conjunction	-746 May 26 j 16:28	26°Ϡ11'45	0°32'13			-741 Jul 13 j 22:18	0°Υ	
minimum elong	-746 May 26 j 15:13	26°Ϡ09'42	0°32'13	retrograde		-741 Aug 28 j 14:27	12°Υ27'04	
	-746 Jun 01 j 11:51	0°Π		min. Earth dist.		-741 Sep 26 j 20:02	6°Υ34'55	0.48840 AU
max. Earth dist.	-746 Jun 12 j 10:59	7°Π08'28	2.63183 AU	opposition		-741 Oct 04 j 20:27	3°Υ40'13	-2°-21'-6
morning rise	-746 Jul 14 j 05:39	27°Π35'11		greatest brilliancy		-741 Oct 03 j 21:32	4°Υ01'05	-2.2m
	-746 Jul 18 j 00:27	0°Ϡ				-741 Oct 15 j 18:35	30°RϠ	
	-746 Sep 03 j 12:25	0°Ω		direct		-741 Nov 07 j 12:47	26°Ϡ31'40	
	-746 Oct 21 j 20:26	0°η		asc. node		-741 Nov 20 j 11:07	27°Ϡ33'52	
	-746 Dec 10 j 20:03	0°Δ				-741 Dec 01 j 21:51	0°Υ	
	-745 Feb 04 j 08:40	0°Ϡ				-740 Feb 08 j 08:07	0°Ϡ	
retrograde	-745 Apr 11 j 03:13	19°Ϡ18'17				-740 Apr 01 j 05:02	0°Π	
desc. node	-745 Apr 16 j 18:26	19°Ϡ06'25				-740 May 21 j 03:19	0°Ϡ	
opposition	-745 May 13 j 11:37	13°Ϡ24'14	-1°-38'-8			-740 Jul 08 j 05:08	0°Ω	
greatest brilliancy	-745 May 14 j 03:46	13°Ϡ11'45	-2.5m	evening set		-740 Aug 01 j 06:38	15°Ω29'01	
min. Earth dist.	-745 May 21 j 00:52	11°Ϡ04'59	0.42803 AU	max. Earth dist.		-740 Aug 22 j 21:23	29°Ω42'11	2.59159 AU
direct	-745 Jun 17 j 08:56	6°Ϡ21'52				-740 Aug 23 j 08:06	0°η	
	-745 Aug 23 j 03:30	0°Ϡ						
	-745 Oct 08 j 05:33	0°Θ		conjunction		-740 Sep 17 j 07:57	16°η51'10	0°45'49
	-745 Nov 19 j 11:27	0°≈		minimum elong		-740 Sep 17 j 09:20	16°η53'30	0°45'48
	-745 Dec 31 j 11:06	0°Ϡ				-740 Oct 06 j 09:00	0°Δ	
	-744 Feb 12 j 11:02	0°Υ		morning rise		-740 Nov 04 j 21:43	20°Δ55'45	
asc. node	-744 Feb 15 j 13:34	2°Υ07'42				-740 Nov 17 j 10:15	0°Ϡ	
	-744 Mar 27 j 23:01	0°Ϡ		desc. node		-740 Dec 06 j 16:24	14°Ϡ09'39	
	-744 May 12 j 21:05	0°Π				-740 Dec 27 j 20:33	0°Ϡ	
evening set	-744 May 17 j 16:26	3°Π05'52				-739 Feb 05 j 05:03	0°Θ	
	-744 Jun 28 j 17:07	0°Ϡ				-739 Mar 16 j 05:36	0°≈	
						-739 Apr 24 j 21:36	0°Ϡ	
conjunction	-744 Jul 04 j 10:20	3°Ϡ38'39	1°03'27			-739 Jun 05 j 14:48	0°Υ	
minimum elong	-744 Jul 04 j 09:23	3°Ϡ37'08	1°03'28			-739 Jul 22 j 06:58	0°Ϡ	
max. Earth dist.	-744 Jul 05 j 12:21	4°Ϡ20'05	2.67224 AU	asc. node		-739 Oct 07 j 10:19	28°Ϡ39'29	
	-744 Aug 14 j 18:26	0°Ω		retrograde		-739 Oct 09 j 02:01	28°Ϡ40'37	
morning rise	-744 Aug 18 j 14:44	2°Ω27'32		min. Earth dist.		-739 Nov 12 j 15:10	20°Ϡ48'09	0.60491 AU
	-744 Sep 30 j 11:03	0°η		opposition		-739 Nov 17 j 17:50	18°Ϡ46'25	1°42'37
	-744 Nov 15 j 13:45	0°Δ		greatest brilliancy		-739 Nov 17 j 05:59	18°Ϡ58'12	-1.6m
	-744 Dec 31 j 06:12	0°Ϡ		direct		-739 Dec 25 j 08:10	10°Ϡ01'43	
	-743 Feb 15 j 01:50	0°Ϡ				-738 Mar 03 j 17:41	0°Π	
desc. node	-743 Mar 03 j 18:19	10°Ϡ44'38				-738 Apr 29 j 14:12	0°Ϡ	
	-743 Apr 03 j 17:38	0°Θ				-738 Jun 18 j 21:28	0°Ω	
	-743 Jun 04 j 08:59	0°≈				-738 Aug 04 j 16:56	0°η	
retrograde	-743 Jun 29 j 00:43	3°≈51'00		evening set		-738 Sep 11 j 22:30	25°η59'01	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 17

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-738 Sep 17 j 16:09	0°♄					-733 Apr 02 j 03:45	0°♄			
max. Earth dist.	-738 Sep 26 j 13:33	6°♄17'14	2.47980 AU		max. Earth dist.		-733 Apr 29 j 21:11	19°♄45'49	2.48927 AU		
desc. node	-738 Oct 24 j 16:05	26°♄37'59					-733 May 14 j 14:55	0°♄			
	-738 Oct 29 j 05:34	0°♄			morning rise		-733 May 16 j 06:10	1°♄07'30			
					asc. node		-733 May 30 j 07:28	10°♄42'07			
conjunction	-738 Nov 03 j 04:24	3°♄40'27	0°-6'-15				-733 Jun 28 j 08:25	0°♄			
minimum elong	-738 Nov 03 j 04:02	3°♄39'45	0°06'15				-733 Aug 14 j 11:58	0°♄			
behind sun begin	-738 Nov 02 j 06:15	2°♄59'16					-733 Oct 03 j 20:48	0°♄			
behind sun end	-738 Nov 04 j 01:48	4°♄20'16					-733 Dec 01 j 16:36	0°♄			
	-738 Dec 07 j 23:02	0°♄			retrograde		-732 Jan 25 j 11:51	13°♄49'07			
morning rise	-738 Dec 31 j 19:33	18°♄28'14			opposition		-732 Mar 03 j 03:10	5°♄27'51	3°58'59		
	-737 Jan 15 j 13:45	0°♄			greatest brilliancy		-732 Mar 04 j 08:11	5°♄00'20	-1.6m		
	-737 Feb 22 j 21:37	0°♄			min. Earth dist.		-732 Mar 09 j 10:46	3°♄04'16	0.60005 AU		
	-737 Apr 02 j 19:57	0°♄					-732 Mar 18 j 04:13	30°♄			
	-737 May 13 j 07:13	0°♄			direct		-732 Apr 13 j 00:29	25°♄39'13			
	-737 Jun 25 j 10:14	0°♄					-732 May 10 j 08:26	0°♄			
	-737 Aug 12 j 05:25	0°♄			desc. node		-732 Jun 15 j 12:07	15°♄06'23			
asc. node	-737 Aug 25 j 08:35	7°♄24'29					-732 Jul 11 j 20:37	0°♄			
	-737 Oct 14 j 23:03	0°♄					-732 Aug 26 j 01:48	0°♄			
retrograde	-737 Nov 13 j 17:30	4°♄59'06					-732 Oct 05 j 19:01	0°♄			
	-737 Dec 11 j 04:58	30°♄					-732 Nov 13 j 16:43	0°♄			
opposition	-737 Dec 23 j 21:12	25°♄08'56	3°52'48				-732 Dec 22 j 07:21	0°♄			
min. Earth dist.	-737 Dec 22 j 13:07	25°♄41'06	0.66800 AU				-731 Jan 30 j 17:02	0°♄			
greatest brilliancy	-737 Dec 23 j 13:41	25°♄16'28	-1.3m				-731 Mar 12 j 15:57	0°♄			
direct	-736 Feb 01 j 23:45	15°♄31'56			evening set		-731 Mar 14 j 09:59	1°♄15'10			
	-736 Mar 29 j 13:02	0°♄			asc. node		-731 Apr 16 j 05:51	24°♄16'55			
	-736 May 26 j 22:42	0°♄					-731 Apr 24 j 13:57	0°♄			
	-736 Jul 14 j 21:35	0°♄									
	-736 Aug 28 j 10:45	0°♄			conjunction		-731 May 09 j 05:46	9°♄56'18	0°13'39		
desc. node	-736 Sep 10 j 14:21	9°♄18'04			minimum elong		-731 May 09 j 05:05	9°♄55'11	0°13'38		
	-736 Oct 08 j 23:14	0°♄			behind sun begin		-731 May 08 j 17:49	9°♄36'13			
evening set	-736 Nov 02 j 13:59	18°♄34'47			behind sun end		-731 May 09 j 16:21	10°♄14'07			
	-736 Nov 17 j 09:54	0°♄			max. Earth dist.		-731 Jun 01 j 22:14	25°♄42'27	2.60140 AU		
	-736 Dec 25 j 16:50	0°♄					-731 Jun 08 j 10:58	0°♄			
					morning rise		-731 Jun 29 j 03:35	13°♄27'20			
conjunction	-735 Jan 04 j 14:38	7°♄49'13	-1°-1'-32				-731 Jul 24 j 23:57	0°♄			
minimum elong	-735 Jan 04 j 12:36	7°♄45'11	1°01'33				-731 Sep 10 j 21:41	0°♄			
max. Earth dist.	-735 Jan 08 j 04:17	10°♄38'12	2.37268 AU				-731 Oct 30 j 11:26	0°♄			
	-735 Feb 01 j 18:33	0°♄					-731 Dec 23 j 02:07	0°♄			
	-735 Mar 12 j 12:37	0°♄			retrograde		-730 Mar 16 j 08:53	27°♄34'37			
morning rise	-735 Mar 15 j 07:06	2°♄06'28			opposition		-730 Apr 19 j 11:17	20°♄49'35	0°46'06		
	-735 Apr 21 j 18:27	0°♄			greatest brilliancy		-730 Apr 19 j 21:41	20°♄40'47	-2.2m		
	-735 Jun 03 j 04:38	0°♄			min. Earth dist.		-730 Apr 27 j 22:08	17°♄58'10	0.47906 AU		
asc. node	-735 Jul 12 j 08:01	26°♄03'58			desc. node		-730 May 03 j 10:48	16°♄14'49			
	-735 Jul 18 j 11:07	0°♄			direct		-730 May 27 j 00:16	12°♄32'42			
	-735 Sep 05 j 23:36	0°♄					-730 Jul 22 j 09:46	0°♄			
	-735 Nov 06 j 17:13	0°♄					-730 Sep 08 j 12:40	0°♄			
retrograde	-735 Dec 17 j 12:47	8°♄26'30					-730 Oct 20 j 06:03	0°♄			
	-734 Jan 23 j 20:13	30°♄					-730 Nov 29 j 14:29	0°♄			
opposition	-734 Jan 26 j 00:26	29°♄08'41	4°39'46				-729 Jan 09 j 09:18	0°♄			
greatest brilliancy	-734 Jan 26 j 11:40	28°♄57'35	-1.3m				-729 Feb 20 j 12:21	0°♄			
min. Earth dist.	-734 Jan 28 j 13:25	28°♄08'30	0.66668 AU		asc. node		-729 Mar 04 j 04:53	8°♄06'48			
direct	-734 Mar 08 j 07:56	19°♄08'11					-729 Apr 05 j 09:10	0°♄			
	-734 Apr 24 j 09:14	0°♄			evening set		-729 May 02 j 07:57	17°♄52'53			
	-734 Jun 21 j 20:32	0°♄					-729 May 20 j 21:12	0°♄			
desc. node	-734 Jul 29 j 12:44	23°♄51'29									
	-734 Aug 07 j 15:18	0°♄			conjunction		-729 Jun 20 j 14:05	19°♄48'07	0°54'20		
	-734 Sep 18 j 19:40	0°♄			minimum elong		-729 Jun 20 j 12:48	19°♄46'03	0°54'21		
	-734 Oct 28 j 09:58	0°♄			max. Earth dist.		-729 Jun 27 j 12:09	24°♄13'55	2.66301 AU		
greatest brilliancy	-734 Nov 24 j 06:50	20°♄59'24	1.2m				-729 Jul 06 j 12:48	0°♄			
	-734 Dec 05 j 17:19	0°♄			morning rise		-729 Aug 05 j 16:23	19°♄11'56			
evening set	-733 Jan 10 j 03:27	27°♄53'16					-729 Aug 22 j 16:11	0°♄			
	-733 Jan 12 j 20:13	0°♄					-729 Oct 08 j 19:57	0°♄			
	-733 Feb 20 j 17:36	0°♄					-729 Nov 24 j 23:24	0°♄			
							-728 Jan 11 j 16:22	0°♄			
conjunction	-733 Mar 16 j 14:29	17°♄52'52	0°-43'-10				-728 Mar 01 j 20:41	0°♄			
minimum elong	-733 Mar 16 j 17:07	17°♄57'44	0°43'10		desc. node		-728 Mar 20 j 09:45	10°♄06'18			

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 18

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-728 May 08 j 08:19	0°☾			-723 Jun 26 j 06:55	0°♈		
retrograde	-728 May 28 j 14:54	2°☾30'13			-723 Aug 11 j 18:02	0°♍		
	-728 Jun 18 j 01:24	30°♌♌		evening set	-723 Aug 25 j 22:19	9°♍29'46		
opposition	-728 Jun 27 j 21:39	27°♌30'46	-5°-56'-13	max. Earth dist.	-723 Sep 11 j 06:14	20°♍38'47	2.52797 AU	
greatest brilliancy	-728 Jun 28 j 06:48	27°♌24'39	-2.8m		-723 Sep 24 j 17:02	0°♊		
min. Earth dist.	-728 Jun 29 j 11:00	27°♌05'48	0.37738 AU					
direct	-728 Jul 28 j 09:25	22°♌21'41		conjunction	-723 Oct 14 j 11:48	14°♊02'32	0°17'03	
	-728 Sep 01 j 21:15	0°☾		minimum elong	-723 Oct 14 j 12:36	14°♊03'59	0°17'01	
	-728 Oct 28 j 03:01	0°♌			-723 Nov 05 j 10:19	0°♌		
	-728 Dec 13 j 15:52	0°♌		desc. node	-723 Nov 10 j 07:46	3°♌36'43		
asc. node	-727 Jan 19 j 03:53	24°♌06'04		morning rise	-723 Dec 07 j 04:06	23°♌44'24		
	-727 Jan 28 j 02:45	0°♍			-723 Dec 15 j 09:32	0°♌		
	-727 Mar 15 j 02:43	0°♌			-722 Jan 23 j 06:11	0°☾		
	-727 Apr 30 j 22:42	0°♊			-722 Mar 02 j 19:05	0°♌		
evening set	-727 Jun 10 j 18:17	25°♊53'08			-722 Apr 10 j 21:52	0°♌		
	-727 Jun 17 j 06:04	0°☾			-722 May 21 j 15:36	0°♍		
max. Earth dist.	-727 Jul 19 j 21:01	20°☾44'16	2.67037 AU		-722 Jul 04 j 11:32	0°♌		
					-722 Aug 24 j 01:04	0°♊		
conjunction	-727 Jul 27 j 01:30	25°☾19'45	1°09'52	asc. node	-722 Sep 11 j 01:07	8°♊43'58		
minimum elong	-727 Jul 27 j 01:21	25°☾19'31	1°09'54	retrograde	-722 Oct 31 j 06:28	21°♊41'11		
	-727 Aug 03 j 08:33	0°♈		min. Earth dist.	-722 Dec 07 j 12:43	12°♊53'18	0.65056 AU	
morning rise	-727 Sep 09 j 17:47	24°♈10'56		opposition	-722 Dec 10 j 08:50	11°♊44'56	3°13'24	
	-727 Sep 18 j 15:03	0°♍		greatest brilliancy	-722 Dec 09 j 20:49	11°♊57'01	-1.4m	
	-727 Nov 02 j 17:25	0°♊		direct	-721 Jan 18 j 15:05	2°♊24'39		
	-727 Dec 16 j 14:50	0°♌			-721 Apr 12 j 23:28	0°☾		
	-726 Jan 28 j 12:20	0°♌			-721 Jun 05 j 16:29	0°♈		
desc. node	-726 Feb 05 j 10:21	5°♌35'42			-721 Jul 23 j 13:08	0°♍		
	-726 Mar 11 j 20:54	0°☾			-721 Sep 05 j 19:00	0°♊		
	-726 Apr 23 j 21:32	0°♌		desc. node	-721 Sep 28 j 06:36	16°♊02'31		
	-726 Jun 10 j 16:18	0°♌		evening set	-721 Oct 12 j 05:31	26°♊15'16		
retrograde	-726 Aug 08 j 02:26	19°♌13'53			-721 Oct 17 j 06:52	0°♌		
min. Earth dist.	-726 Sep 04 j 11:17	14°♌11'51	0.43776 AU	max. Earth dist.	-721 Nov 03 j 12:57	12°♌56'53	2.40262 AU	
greatest brilliancy	-726 Sep 10 j 19:22	12°♌05'07	-2.5m		-721 Nov 25 j 19:24	0°♌		
opposition	-726 Sep 12 j 09:41	11°♌33'00	-4°-26'-57					
direct	-726 Oct 14 j 04:40	5°♌17'40		conjunction	-721 Dec 09 j 14:15	10°♌42'33	0°-44'-29	
asc. node	-726 Dec 07 j 02:04	19°♌48'55		minimum elong	-721 Dec 09 j 11:37	10°♌37'25	0°44'29	
	-726 Dec 27 j 23:31	0°♍			-720 Jan 03 j 04:35	0°☾		
	-725 Feb 19 j 12:46	0°♌			-720 Feb 10 j 07:45	0°♌		
	-725 Apr 10 j 14:44	0°♊		morning rise	-720 Feb 14 j 18:04	3°♌27'54		
	-725 May 29 j 11:15	0°☾			-720 Mar 20 j 02:24	0°♌		
	-725 Jul 16 j 03:02	0°♈			-720 Apr 29 j 08:41	0°♍		
evening set	-725 Jul 18 j 10:12	1°♈28'14			-720 Jun 10 j 21:51	0°♌		
max. Earth dist.	-725 Aug 13 j 11:32	18°♈19'29	2.62393 AU		-720 Jul 26 j 17:45	0°♊		
	-725 Aug 31 j 04:46	0°♍		asc. node	-720 Jul 29 j 00:15	1°♊24'54		
					-720 Sep 16 j 12:33	0°☾		
conjunction	-725 Sep 02 j 15:30	1°♍37'37	0°58'13	retrograde	-720 Dec 03 j 19:42	25°☾38'45		
minimum elong	-725 Sep 02 j 16:40	1°♍39'34	0°58'13	opposition	-719 Jan 12 j 16:28	16°☾05'50	4°30'46	
	-725 Oct 14 j 10:22	0°♊		greatest brilliancy	-719 Jan 12 j 19:38	16°☾02'40	-1.2m	
morning rise	-725 Oct 19 j 05:17	3°♊19'33		min. Earth dist.	-719 Jan 13 j 16:53	15°☾41'31	0.67494 AU	
	-725 Nov 25 j 20:22	0°♌		direct	-719 Feb 22 j 16:20	6°☾11'20		
desc. node	-725 Dec 24 j 09:18	20°♌50'20			-719 May 09 j 13:09	0°♈		
	-724 Jan 05 j 17:44	0°♌			-719 Jul 01 j 04:47	0°♍		
	-724 Feb 14 j 13:57	0°☾		desc. node	-719 Aug 15 j 05:31	29°♍36'28		
	-724 Mar 25 j 02:27	0°♌			-719 Aug 15 j 19:09	0°♊		
	-724 May 04 j 09:43	0°♌			-719 Sep 26 j 14:56	0°♌		
	-724 Jun 16 j 10:30	0°♍			-719 Nov 05 j 02:37	0°♌		
	-724 Aug 07 j 11:42	0°♌		evening set	-719 Dec 13 j 05:07	29°♌52'46		
retrograde	-724 Sep 23 j 20:40	12°♌39'07			-719 Dec 13 j 08:47	0°☾		
asc. node	-724 Oct 24 j 01:03	6°♌23'05			-718 Jan 20 j 10:03	0°♌		
min. Earth dist.	-724 Oct 26 j 09:51	5°♌29'21	0.56417 AU					
opposition	-724 Nov 01 j 21:16	2°♌58'04	0°23'57	conjunction	-718 Feb 18 j 06:00	22°♌23'28	-1°00'-12	
greatest brilliancy	-724 Nov 01 j 17:26	3°♌01'48	-1.8m	minimum elong	-718 Feb 18 j 08:18	22°♌27'53	1°00'12	
	-724 Nov 09 j 19:23	30°♌♌			-718 Feb 28 j 04:53	0°♌		
direct	-724 Dec 08 j 03:18	24°♌44'14			-718 Apr 09 j 11:58	0°♍		
	-723 Jan 08 j 05:44	0°♌		max. Earth dist.	-718 Apr 09 j 19:44	0°♍14'06	2.43603 AU	
	-723 Mar 16 j 03:03	0°♊		morning rise	-718 Apr 24 j 18:18	10°♍59'37		
	-723 May 08 j 02:25	0°☾			-718 May 21 j 20:55	0°♌		

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 19

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

asc. node	-718 Jun 15 j 22:36	16°♄59'52		min. Earth dist.	-713 Jun 04 j 03:13	26°♄33'22	0.40404 AU
	-718 Jul 05 j 16:26	0°♄		direct	-713 Jul 01 j 03:19	22°♄04'44	
	-718 Aug 22 j 09:31	0°♄			-713 Aug 05 j 21:08	0°♄	
	-718 Oct 13 j 21:56	0°♄			-713 Sep 29 j 02:46	0°♄	
retrograde	-717 Jan 09 j 11:36	29°♄41'25			-713 Nov 12 j 09:41	0°♄	
opposition	-717 Feb 17 j 00:01	20°♄54'34	4°27'20		-713 Dec 25 j 09:44	0°♄	
greatest brilliancy	-717 Feb 17 j 23:25	20°♄31'56	-1.4m	asc. node	-712 Feb 05 j 18:55	29°♄09'09	
min. Earth dist.	-717 Feb 21 j 21:15	19°♄01'11	0.63366 AU		-712 Feb 07 j 00:53	0°♄	
direct	-717 Mar 30 j 06:57	10°♄55'27			-712 Mar 22 j 22:43	0°♄	
	-717 Jun 02 j 06:33	0°♄			-712 May 08 j 03:07	0°♄	
desc. node	-717 Jul 03 j 04:00	17°♄06'45		evening set	-712 May 26 j 15:55	11°♄52'19	
	-717 Jul 23 j 17:56	0°♄			-712 Jun 24 j 02:29	0°♄	
	-717 Sep 05 j 05:31	0°♄		max. Earth dist.	-712 Jul 10 j 18:47	10°♄37'06	2.67397 AU
	-717 Oct 15 j 07:54	0°♄					
	-717 Nov 22 j 21:44	0°♄		conjunction	-712 Jul 12 j 18:12	11°♄52'35	1°06'58
	-717 Dec 31 j 05:57	0°♄		minimum elong	-712 Jul 12 j 17:31	11°♄51'29	1°06'59
	-716 Feb 08 j 09:07	0°♄			-712 Aug 10 j 03:42	0°♄	
evening set	-716 Feb 20 j 08:46	8°♄58'43		morning rise	-712 Aug 26 j 14:49	10°♄33'43	
	-716 Mar 20 j 01:26	0°♄			-712 Sep 25 j 16:13	0°♄	
					-712 Nov 10 j 08:59	0°♄	
conjunction	-716 Apr 19 j 22:50	21°♄51'54	0°-7'-53		-712 Dec 25 j 07:11	0°♄	
minimum elong	-716 Apr 19 j 23:17	21°♄52'42	0°07'53		-711 Feb 07 j 18:55	0°♄	
behind sun begin	-716 Apr 19 j 02:32	21°♄16'38		desc. node	-711 Feb 22 j 02:14	9°♄38'13	
behind sun end	-716 Apr 20 j 20:02	22°♄28'45			-711 Mar 24 j 16:41	0°♄	
	-716 May 01 j 17:30	0°♄			-711 May 12 j 07:45	0°♄	
asc. node	-716 May 02 j 22:05	0°♄48'59		retrograde	-711 Jul 14 j 18:23	21°♄28'30	
max. Earth dist.	-716 May 21 j 07:48	13°♄18'22	2.56291 AU	min. Earth dist.	-711 Aug 10 j 10:57	16°♄59'08	0.39565 AU
morning rise	-716 Jun 13 j 00:03	28°♄22'40		greatest brilliancy	-711 Aug 14 j 21:11	15°♄41'06	-2.7m
	-716 Jun 15 j 11:20	0°♄		opposition	-711 Aug 16 j 09:29	15°♄14'12	-6°-19'-32
	-716 Aug 01 j 02:58	0°♄		direct	-711 Sep 15 j 14:39	9°♄52'40	
	-716 Sep 18 j 15:57	0°♄			-711 Nov 18 j 22:05	0°♄	
	-716 Nov 09 j 05:04	0°♄		asc. node	-711 Dec 23 j 18:26	19°♄11'40	
	-715 Jan 10 j 12:18	0°♄			-710 Jan 11 j 00:50	0°♄	
retrograde	-715 Feb 22 j 09:40	9°♄03'46			-710 Mar 01 j 02:41	0°♄	
opposition	-715 Mar 30 j 02:30	1°♄34'59	2°27'07		-710 Apr 18 j 12:10	0°♄	
greatest brilliancy	-715 Mar 31 j 05:23	1°♄10'48	-1.9m		-710 Jun 05 j 14:25	0°♄	
	-715 Apr 03 j 11:43	30°♄		evening set	-710 Jul 03 j 19:51	17°♄47'50	
min. Earth dist.	-715 Apr 07 j 04:15	28°♄41'01	0.53071 AU		-710 Jul 22 j 23:15	0°♄	
direct	-715 May 08 j 10:51	22°♄27'22		max. Earth dist.	-710 Aug 03 j 16:39	7°♄32'21	2.64836 AU
desc. node	-715 May 20 j 03:43	23°♄21'41					
	-715 Jun 13 j 06:06	0°♄		conjunction	-710 Aug 18 j 17:57	17°♄18'28	1°06'07
	-715 Aug 08 j 01:35	0°♄		minimum elong	-710 Aug 18 j 18:41	17°♄19'40	1°06'08
	-715 Sep 20 j 05:51	0°♄			-710 Sep 07 j 01:39	0°♄	
	-715 Oct 30 j 07:04	0°♄		morning rise	-710 Oct 03 j 03:03	17°♄25'52	
	-715 Dec 08 j 16:15	0°♄			-710 Oct 21 j 13:37	0°♄	
	-714 Jan 17 j 17:36	0°♄			-710 Dec 03 j 10:37	0°♄	
	-714 Feb 28 j 06:32	0°♄		desc. node	-709 Jan 10 j 01:33	27°♄10'28	
asc. node	-714 Mar 20 j 20:36	14°♄23'41			-709 Jan 13 j 22:08	0°♄	
	-714 Apr 12 j 16:04	0°♄			-709 Feb 23 j 10:36	0°♄	
evening set	-714 Apr 14 j 17:26	1°♄23'25			-709 Apr 04 j 17:55	0°♄	
	-714 May 27 j 20:27	0°♄			-709 May 16 j 05:56	0°♄	
					-709 Jul 01 j 09:44	0°♄	
conjunction	-714 Jun 05 j 00:46	5°♄19'39	0°41'24	retrograde	-709 Sep 08 j 01:51	24°♄27'06	
minimum elong	-714 Jun 04 j 23:24	5°♄17'25	0°41'23	min. Earth dist.	-709 Oct 08 j 11:43	18°♄05'58	0.51667 AU
max. Earth dist.	-714 Jun 18 j 03:21	13°♄48'36	2.64535 AU	opposition	-709 Oct 16 j 02:10	15°♄14'58	-1°-15'-9
	-714 Jul 13 j 09:12	0°♄		greatest brilliancy	-709 Oct 15 j 13:58	15°♄26'26	-2.0m
morning rise	-714 Jul 22 j 12:48	5°♄49'49		asc. node	-709 Nov 10 j 17:56	8°♄13'02	
	-714 Aug 29 j 16:59	0°♄		direct	-709 Nov 19 j 18:43	7°♄40'21	
	-714 Oct 16 j 12:53	0°♄			-708 Jan 30 j 14:46	0°♄	
	-714 Dec 04 j 05:49	0°♄			-708 Mar 26 j 05:39	0°♄	
	-713 Jan 24 j 16:28	0°♄			-708 May 16 j 00:53	0°♄	
	-713 Apr 01 j 17:48	0°♄			-708 Jul 03 j 11:10	0°♄	
desc. node	-713 Apr 07 j 03:06	1°♄21'05		evening set	-708 Aug 10 j 00:43	24°♄15'10	
retrograde	-713 Apr 27 j 15:42	3°♄47'09			-708 Aug 18 j 17:12	0°♄	
	-713 May 23 j 01:15	30°♄		max. Earth dist.	-708 Aug 29 j 13:37	7°♄15'20	2.57089 AU
opposition	-713 May 28 j 22:28	28°♄20'38	-3°-15'-42				
greatest brilliancy	-713 May 29 j 21:48	28°♄03'44	-2.7m	conjunction	-708 Sep 26 j 18:34	26°♄32'19	0°36'33

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 20

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

minimum elong	-708 Sep 26 j 19:53	26° \mathbb{M} 34'36	0°36'32		-703 Jul 13 j 06:36	0° \mathbb{H}	
	-708 Oct 01 j 17:51	0° \mathbb{A}			-703 Aug 30 j 21:38	0° \mathbb{S}	
	-708 Nov 12 j 16:36	0° \mathbb{M}			-703 Oct 26 j 12:26	0° \mathbb{Q}	
morning rise	-708 Nov 15 j 19:45	2° \mathbb{M} 17'37		retrograde	-703 Dec 25 j 15:38	16° \mathbb{Q} 19'40	
desc. node	-708 Nov 27 j 00:33	10° \mathbb{M} 33'14		opposition	-702 Feb 02 j 20:05	7° \mathbb{Q} 11'46	4°39'01
	-708 Dec 22 j 22:57	0° \mathbb{J}		greatest brilliancy	-702 Feb 03 j 11:50	6° \mathbb{Q} 56'18	-1.3m
	-707 Jan 31 j 02:55	0° \mathbb{Z}		min. Earth dist.	-702 Feb 06 j 05:14	5° \mathbb{Q} 52'08	0.65785 AU
	-707 Mar 10 j 22:23	0° \approx			-702 Feb 23 j 06:33	30° \mathbb{R} \mathbb{S}	
	-707 Apr 19 j 07:55	0° \mathbb{H}		direct	-702 Mar 16 j 05:01	27° \mathbb{S} 09'58	
	-707 May 30 j 13:10	0° \mathbb{Y}			-702 Apr 07 j 13:17	0° \mathbb{Q}	
	-707 Jul 14 j 17:20	0° \mathbb{B}			-702 Jun 15 j 02:48	0° \mathbb{M}	
	-707 Sep 10 j 17:25	0° \mathbb{H}		desc. node	-702 Jul 19 j 21:39	21° \mathbb{M} 16'38	
asc. node	-707 Sep 27 j 16:29	5° \mathbb{H} 13'52			-702 Aug 02 j 02:47	0° \mathbb{A}	
retrograde	-707 Oct 17 j 09:18	7° \mathbb{H} 38'52			-702 Sep 13 j 16:37	0° \mathbb{M}	
	-707 Nov 20 j 11:25	30° \mathbb{R} \mathbb{B}			-702 Oct 23 j 10:33	0° \mathbb{J}	
min. Earth dist.	-707 Nov 21 j 22:53	29° \mathbb{B} 25'00	0.62371 AU		-702 Nov 30 j 19:38	0° \mathbb{Z}	
opposition	-707 Nov 26 j 06:09	27° \mathbb{B} 41'48	2°20'29		-701 Jan 07 j 23:32	0° \approx	
greatest brilliancy	-707 Nov 25 j 16:49	27° \mathbb{B} 55'08	-1.5m	evening set	-701 Jan 25 j 15:45	13° \approx 44'03	
direct	-706 Jan 03 j 11:43	18° \mathbb{B} 42'50			-701 Feb 15 j 21:50	0° \mathbb{H}	
	-706 Feb 21 j 03:28	0° \mathbb{H}			-701 Mar 28 j 09:04	0° \mathbb{Y}	
	-706 Apr 23 j 10:57	0° \mathbb{S}					
	-706 Jun 13 j 17:48	0° \mathbb{Q}		conjunction	-701 Mar 30 j 06:08	1° \mathbb{Y} 21'31	0°-30'-38
	-706 Jul 30 j 21:37	0° \mathbb{M}		minimum elong	-701 Mar 30 j 08:05	1° \mathbb{Y} 25'03	0°30'38
	-706 Sep 12 j 23:28	0° \mathbb{A}		max. Earth dist.	-701 May 08 j 23:21	29° \mathbb{Y} 23'13	2.51727 AU
evening set	-706 Sep 22 j 08:52	6° \mathbb{A} 38'18			-701 May 09 j 20:43	0° \mathbb{B}	
max. Earth dist.	-706 Oct 07 j 15:12	17° \mathbb{A} 36'26	2.45180 AU	asc. node	-701 May 20 j 12:43	7° \mathbb{B} 17'48	
desc. node	-706 Oct 14 j 22:57	22° \mathbb{A} 56'44		morning rise	-701 May 27 j 07:42	11° \mathbb{B} 53'49	
	-706 Oct 24 j 12:45	0° \mathbb{M}			-701 Jun 23 j 13:06	0° \mathbb{H}	
					-701 Aug 09 j 10:22	0° \mathbb{S}	
conjunction	-706 Nov 15 j 12:30	16° \mathbb{M} 29'17	0°-20'-32		-701 Sep 27 j 22:36	0° \mathbb{Q}	
minimum elong	-706 Nov 15 j 11:14	16° \mathbb{M} 26'52	0°20'32		-701 Nov 21 j 23:03	0° \mathbb{M}	
	-706 Dec 03 j 04:45	0° \mathbb{J}		retrograde	-700 Feb 04 j 09:14	22° \mathbb{M} 50'10	
	-705 Jan 10 j 17:40	0° \mathbb{Z}		opposition	-700 Mar 12 j 09:39	14° \mathbb{M} 45'38	3°32'45
morning rise	-705 Jan 16 j 06:59	4° \mathbb{Z} 21'35		greatest brilliancy	-700 Mar 13 j 15:51	14° \mathbb{M} 17'23	-1.7m
greatest brilliancy	-705 Jan 16 j 14:25	4° \mathbb{Z} 36'10	1.2m	min. Earth dist.	-700 Mar 19 j 10:11	12° \mathbb{M} 08'19	0.57763 AU
	-705 Feb 17 j 23:36	0° \approx		direct	-700 Apr 21 j 21:06	5° \mathbb{M} 07'25	
	-705 Mar 28 j 19:51	0° \mathbb{H}		desc. node	-700 Jun 05 j 20:11	16° \mathbb{M} 03'45	
	-705 May 08 j 04:02	0° \mathbb{Y}			-700 Jul 03 j 14:00	0° \mathbb{A}	
	-705 Jun 19 j 23:17	0° \mathbb{B}			-700 Aug 19 j 19:00	0° \mathbb{M}	
	-705 Aug 05 j 18:25	0° \mathbb{H}			-700 Sep 30 j 03:25	0° \mathbb{J}	
asc. node	-705 Aug 15 j 15:58	5° \mathbb{H} 52'01			-700 Nov 08 j 08:43	0° \mathbb{Z}	
	-705 Oct 01 j 08:02	0° \mathbb{S}			-700 Dec 17 j 04:16	0° \approx	
retrograde	-705 Nov 21 j 09:53	12° \mathbb{S} 51'45			-699 Jan 25 j 17:48	0° \mathbb{H}	
opposition	-705 Dec 31 j 11:53	3° \mathbb{S} 06'44	4°10'09		-699 Mar 07 j 20:07	0° \mathbb{Y}	
greatest brilliancy	-705 Dec 31 j 07:48	3° \mathbb{S} 10'49	-1.2m	evening set	-699 Mar 26 j 08:40	13° \mathbb{Y} 05'17	
min. Earth dist.	-705 Dec 31 j 00:01	3° \mathbb{S} 18'37	0.67325 AU	asc. node	-699 Apr 06 j 12:23	20° \mathbb{Y} 50'28	
	-704 Jan 08 j 10:10	30° \mathbb{R} \mathbb{H}			-699 Apr 19 j 20:38	0° \mathbb{B}	
direct	-704 Feb 09 j 23:03	23° \mathbb{H} 22'18					
	-704 Mar 17 j 00:18	0° \mathbb{S}		conjunction	-699 May 19 j 09:38	19° \mathbb{B} 51'19	0°24'48
	-704 May 20 j 15:32	0° \mathbb{Q}		minimum elong	-699 May 19 j 08:34	19° \mathbb{B} 49'32	0°24'48
	-704 Jul 09 j 15:37	0° \mathbb{M}			-699 Jun 03 j 19:04	0° \mathbb{H}	
	-704 Aug 23 j 12:57	0° \mathbb{A}		max. Earth dist.	-699 Jun 08 j 03:28	2° \mathbb{H} 50'47	2.61921 AU
desc. node	-704 Aug 31 j 22:02	5° \mathbb{A} 52'50		morning rise	-699 Jul 07 j 21:53	22° \mathbb{H} 05'53	
	-704 Oct 04 j 03:59	0° \mathbb{M}			-699 Jul 20 j 06:46	0° \mathbb{S}	
	-704 Nov 12 j 14:57	0° \mathbb{J}			-699 Sep 05 j 22:00	0° \mathbb{Q}	
evening set	-704 Nov 16 j 13:43	3° \mathbb{J} 03'54			-699 Oct 24 j 17:07	0° \mathbb{M}	
	-704 Dec 20 j 21:29	0° \mathbb{Z}			-699 Dec 14 j 22:32	0° \mathbb{A}	
					-698 Feb 13 j 22:57	0° \mathbb{M}	
conjunction	-703 Jan 20 j 19:46	24° \mathbb{Z} 24'21	-1°-5'-26	retrograde	-698 Mar 30 j 08:14	9° \mathbb{M} 49'44	
minimum elong	-703 Jan 20 j 19:18	24° \mathbb{Z} 23'25	1°05'27	desc. node	-698 Apr 23 j 18:44	6° \mathbb{M} 12'33	
	-703 Jan 27 j 22:39	0° \approx		opposition	-698 May 02 j 12:24	3° \mathbb{M} 32'15	0°-30'-43
max. Earth dist.	-703 Mar 03 j 10:34	26° \approx 45'38	2.38649 AU	greatest brilliancy	-698 May 02 j 18:27	3° \mathbb{M} 27'22	-2.4m
	-703 Mar 07 j 16:22	0° \mathbb{H}		min. Earth dist.	-698 May 10 j 16:50	0° \mathbb{M} 54'15	0.45021 AU
morning rise	-703 Mar 30 j 22:32	17° \mathbb{H} 30'45			-698 May 13 j 16:14	30° \mathbb{R} \mathbb{A}	
	-703 Apr 16 j 21:51	0° \mathbb{Y}		direct	-698 Jun 07 j 16:04	25° \mathbb{A} 54'06	
	-703 May 29 j 06:13	0° \mathbb{B}			-698 Jul 02 j 20:53	0° \mathbb{M}	
asc. node	-703 Jul 02 j 14:54	23° \mathbb{B} 04'48			-698 Aug 30 j 14:59	0° \mathbb{J}	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 21

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-698 Oct 13 j 05:55	0°☾			-693 Oct 09 j 18:34	0°♊		
	-698 Nov 23 j 11:49	0°♋		morning rise	-693 Oct 29 j 01:43	13°♊32'43		
	-697 Jan 03 j 20:05	0°♌			-693 Nov 21 j 00:29	0°♍		
	-697 Feb 15 j 08:53	0°♎		desc. node	-693 Dec 14 j 16:38	17°♍20'55		
asc. node	-697 Feb 22 j 11:53	4°♎55'13			-693 Dec 31 j 16:02	0°♏		
	-697 Mar 31 j 12:25	0°♐			-692 Feb 09 j 05:49	0°☾		
evening set	-697 May 11 j 19:34	27°♐09'12			-692 Mar 19 j 11:04	0°♋		
	-697 May 16 j 04:55	0°♑			-692 Apr 28 j 08:05	0°♌		
					-692 Jun 09 j 10:52	0°♎		
conjunction	-697 Jun 29 j 04:16	28°♑14'42	1°00'06		-692 Jul 27 j 13:13	0°♏		
minimum elong	-697 Jun 29 j 03:08	28°♑12'54	1°00'06	retrograde	-692 Oct 02 j 17:58	22°♏26'55		
	-697 Jul 01 j 22:16	0°☾		asc. node	-692 Oct 14 j 08:40	21°♏28'55		
max. Earth dist.	-697 Jul 02 j 21:22	0°☾36'50	2.66913 AU	min. Earth dist.	-692 Nov 05 j 10:11	14°♏52'23	0.58771 AU	
morning rise	-697 Aug 13 j 16:54	27°☾15'21		opposition	-692 Nov 11 j 03:16	12°♏37'07	1°11'49	
	-697 Aug 18 j 00:11	0°♑		greatest brilliancy	-692 Nov 10 j 17:42	12°♏46'35	-1.7m	
	-697 Oct 03 j 21:40	0°♒		direct	-692 Dec 18 j 03:17	4°♏05'19		
	-697 Nov 19 j 10:30	0°♊			-691 Mar 08 j 13:11	0°♑		
	-696 Jan 04 j 21:41	0°♋			-691 May 02 j 12:51	0°☾		
	-696 Feb 21 j 04:52	0°♌			-691 Jun 21 j 08:50	0°♑		
desc. node	-696 Mar 10 j 18:32	11°♌20'37			-691 Aug 07 j 01:53	0°♒		
	-696 Apr 12 j 16:18	0°☾		evening set	-691 Sep 04 j 10:19	19°♒07'29		
retrograde	-696 Jun 15 j 16:02	20°☾27'00		max. Earth dist.	-691 Sep 19 j 13:50	29°♒38'19	2.50191 AU	
min. Earth dist.	-696 Jul 14 j 15:46	15°☾43'12	0.37530 AU		-691 Sep 20 j 02:13	0°♊		
opposition	-696 Jul 16 j 04:49	15°☾18'34	-6°-44'-35					
greatest brilliancy	-696 Jul 15 j 19:11	15°☾24'59	-2.9m	conjunction	-691 Oct 25 j 08:49	25°♊17'40	0°04'08	
direct	-696 Aug 14 j 19:36	10°☾22'35		minimum elong	-691 Oct 25 j 09:00	25°♊18'01	0°04'07	
	-696 Oct 15 j 17:55	0°♋		behind sun begin	-691 Oct 24 j 11:03	24°♊37'51		
	-696 Dec 05 j 20:30	0°♌		behind sun end	-691 Oct 26 j 06:58	25°♊58'14		
asc. node	-695 Jan 09 j 09:59	21°♌57'24		desc. node	-691 Oct 31 j 16:12	29°♊55'52		
	-695 Jan 21 j 22:49	0°♎			-691 Oct 31 j 18:26	0°♍		
	-695 Mar 09 j 18:23	0°♏			-691 Dec 10 j 15:00	0°♏		
	-695 Apr 26 j 01:16	0°♑		morning rise	-691 Dec 20 j 15:31	7°♏42'06		
	-695 Jun 12 j 14:13	0°☾			-690 Jan 18 j 08:32	0°☾		
evening set	-695 Jun 19 j 05:39	4°☾11'59			-690 Feb 25 j 18:16	0°♋		
max. Earth dist.	-695 Jul 25 j 05:59	27°☾06'13	2.66468 AU		-690 Apr 05 j 17:30	0°♌		
	-695 Jul 29 j 18:28	0°♑			-690 May 16 j 05:58	0°♎		
					-690 Jun 28 j 13:00	0°♏		
conjunction	-695 Aug 04 j 06:56	3°♑32'39	1°09'42		-690 Aug 16 j 03:07	0°♑		
minimum elong	-695 Aug 04 j 07:07	3°♑32'57	1°09'42	asc. node	-690 Sep 01 j 06:49	8°♑42'22		
	-695 Sep 13 j 23:18	0°♒		retrograde	-690 Nov 08 j 01:38	29°♑50'56		
morning rise	-695 Sep 18 j 01:48	2°♒42'23		min. Earth dist.	-690 Dec 16 j 04:49	20°♑45'41	0.66152 AU	
	-695 Oct 28 j 20:04	0°♊		opposition	-690 Dec 18 j 04:48	19°♑57'28	3°37'57	
	-695 Dec 11 j 08:00	0°♋		greatest brilliancy	-690 Dec 17 j 18:57	20°♑07'22	-1.3m	
desc. node	-694 Jan 22 j 15:27	0°♌		direct	-689 Jan 26 j 22:17	10°♑27'23		
	-694 Jan 26 j 17:40	2°♌56'12			-689 Apr 04 j 20:18	0°☾		
	-694 Mar 05 j 04:39	0°☾			-689 May 31 j 00:14	0°♑		
	-694 Apr 15 j 21:04	0°♋			-689 Jul 18 j 12:56	0°♒		
	-694 May 30 j 00:55	0°♌			-689 Sep 01 j 00:19	0°♊		
	-694 Jul 29 j 05:00	0°♎		desc. node	-689 Sep 18 j 14:56	12°♊29'26		
retrograde	-694 Aug 20 j 03:13	3°♎16'57			-689 Oct 12 j 13:51	0°♍		
	-694 Sep 10 j 13:23	30°♎		evening set	-689 Oct 24 j 12:01	8°♍55'18		
min. Earth dist.	-694 Sep 17 j 10:11	27°♎48'26	0.46530 AU		-689 Nov 21 j 02:04	0°♏		
greatest brilliancy	-694 Sep 24 j 07:33	25°♎23'30	-2.3m	max. Earth dist.	-689 Nov 28 j 20:04	6°♏00'44	2.38087 AU	
opposition	-694 Sep 25 j 14:06	24°♎56'36	-3°-14'-14					
direct	-694 Oct 28 j 10:45	18°♎11'03		conjunction	-689 Dec 24 j 11:08	26°♏05'20	0°-55'-28	
asc. node	-694 Nov 27 j 08:58	23°♎17'55		minimum elong	-689 Dec 24 j 08:29	26°♏00'08	0°55'28	
	-694 Dec 15 j 12:43	0°♏			-689 Dec 29 j 10:18	0°☾		
	-693 Feb 12 j 15:14	0°♐			-688 Feb 05 j 12:21	0°♋		
	-693 Apr 05 j 03:15	0°♑		morning rise	-688 Mar 02 j 13:55	20°♋17'16		
	-693 May 24 j 13:40	0°☾			-688 Mar 15 j 05:42	0°♌		
	-693 Jul 11 j 11:26	0°♑			-688 Apr 24 j 10:22	0°♎		
evening set	-693 Jul 26 j 21:08	9°♑52'42			-688 Jun 05 j 19:51	0°♏		
max. Earth dist.	-693 Aug 19 j 11:34	25°♑16'41	2.60694 AU	asc. node	-688 Jul 19 j 05:48	28°♏44'34		
	-693 Aug 26 j 14:46	0°♒			-688 Jul 21 j 05:17	0°♑		
					-688 Sep 09 j 09:39	0°☾		
conjunction	-693 Sep 11 j 11:58	10°♒38'08	0°51'35		-688 Nov 16 j 19:12	0°♑		
minimum elong	-693 Sep 11 j 13:17	10°♒40'22	0°51'35	retrograde	-688 Dec 11 j 16:00	3°♑26'40		

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-687 Jan 03 j 17:16	30° $\text{R}\mathfrak{E}$				-683 Dec 03 j 02:24	0° \approx	
opposition	-687 Jan 20 j 07:55	24° \mathfrak{E} 01'44	4°37'18			-682 Jan 12 j 11:37	0° H	
greatest brilliancy	-687 Jan 20 j 15:33	23° \mathfrak{E} 54'09	-1.2m			-682 Feb 23 j 06:46	0° Y	
min. Earth dist.	-687 Jan 22 j 04:42	23° \mathfrak{E} 17'19	0.67167 AU	asc. node		-682 Mar 11 j 03:12	11° Y 03'26	
direct	-687 Mar 02 j 12:15	14° \mathfrak{E} 03'16				-682 Apr 07 j 20:59	0° B	
	-687 Apr 30 j 16:35	0° Ω		evening set		-682 Apr 24 j 22:40	11° B 25'21	
	-687 Jun 25 j 06:35	0° M				-682 May 23 j 04:30	0° II	
desc. node	-687 Aug 05 j 13:26	26° M 35'02						
	-687 Aug 10 j 13:49	0° $\underline{\text{A}}$		conjunction		-682 Jun 14 j 00:58	14° II 09'22	0°49'22
	-687 Sep 21 j 15:39	0° M		minimum elong		-682 Jun 13 j 23:37	14° II 07'11	0°49'21
	-687 Oct 31 j 05:29	0° Z		max. Earth dist.		-682 Jun 23 j 17:08	20° II 22'29	2.65614 AU
	-687 Dec 08 j 12:37	0° \mathfrak{E}				-682 Jul 08 j 18:00	0° \mathfrak{E}	
evening set	-687 Dec 28 j 21:46	16° \mathfrak{E} 05'14		morning rise		-682 Jul 30 j 16:37	13° \mathfrak{E} 58'29	
	-686 Jan 15 j 14:30	0° \approx				-682 Aug 24 j 22:52	0° Ω	
greatest brilliancy	-686 Jan 17 j 04:46	1° \approx 14'55	1.2m			-682 Oct 11 j 09:02	0° M	
	-686 Feb 23 j 09:51	0° H				-682 Nov 28 j 02:47	0° $\underline{\text{A}}$	
						-681 Jan 16 j 03:01	0° M	
conjunction	-686 Mar 05 j 11:07	7° H 36'18	0°-51'-30			-681 Mar 11 j 01:28	0° Z	
minimum elong	-686 Mar 05 j 13:55	7° H 41'35	0°51'29	desc. node		-681 Mar 28 j 10:02	8° Z 03'12	
	-686 Apr 04 j 17:27	0° Y		retrograde		-681 May 15 j 10:31	19° Z 51'55	
max. Earth dist.	-686 Apr 22 j 00:18	12° Y 26'03	2.46563 AU	opposition		-681 Jun 14 j 22:14	14° Z 45'51	-4°-53'-23
morning rise	-686 May 07 j 07:43	23° Y 13'25		greatest brilliancy		-681 Jun 15 j 18:13	14° Z 32'07	-2.8m
	-686 May 17 j 02:02	0° B		min. Earth dist.		-681 Jun 18 j 19:34	13° Z 41'47	0.38603 AU
asc. node	-686 Jun 06 j 05:40	13° B 43'43		direct		-681 Jul 16 j 12:44	9° Z 12'02	
	-686 Jun 30 j 18:38	0° II				-681 Sep 16 j 21:16	0° \mathfrak{E}	
	-686 Aug 17 j 01:34	0° \mathfrak{E}				-681 Nov 04 j 07:49	0° \approx	
	-686 Oct 07 j 02:51	0° Ω				-681 Dec 18 j 22:20	0° H	
	-686 Dec 09 j 04:19	0° M		asc. node		-680 Jan 27 j 02:21	26° H 26'04	
retrograde	-685 Jan 18 j 11:20	8° M 06'41				-680 Feb 01 j 10:14	0° Y	
	-685 Feb 24 j 08:17	30° $\text{R}\mathfrak{E}$				-680 Mar 17 j 20:34	0° B	
opposition	-685 Feb 25 j 12:16	29° Ω 33'18	4°12'48			-680 May 03 j 08:30	0° II	
greatest brilliancy	-685 Feb 26 j 15:04	29° Ω 07'36	-1.5m	evening set		-680 Jun 04 j 08:47	20° II 23'33	
min. Earth dist.	-685 Mar 03 j 04:41	27° Ω 22'38	0.61632 AU			-680 Jun 19 j 11:44	0° \mathfrak{E}	
direct	-685 Apr 07 j 14:35	19° Ω 38'34		max. Earth dist.		-680 Jul 16 j 01:33	16° \mathfrak{E} 54'01	2.67302 AU
	-685 May 22 j 01:21	0° M						
desc. node	-685 Jun 23 j 12:29	15° M 57'19		conjunction		-680 Jul 20 j 23:08	20° \mathfrak{E} 01'25	1°09'08
	-685 Jul 17 j 03:18	0° $\underline{\text{A}}$		minimum elong		-680 Jul 20 j 22:45	20° \mathfrak{E} 00'48	1°09'08
	-685 Aug 30 j 13:42	0° M				-680 Aug 05 j 13:44	0° Ω	
	-685 Oct 10 j 00:28	0° Z		morning rise		-680 Sep 03 j 15:49	18° Ω 44'15	
	-685 Nov 17 j 18:35	0° \mathfrak{E}				-680 Sep 20 j 23:13	0° M	
	-685 Dec 26 j 05:47	0° \approx				-680 Nov 05 j 08:04	0° $\underline{\text{A}}$	
	-684 Feb 03 j 11:27	0° H				-680 Dec 19 j 16:05	0° M	
evening set	-684 Mar 04 j 17:50	22° H 23'41		desc. node		-679 Feb 01 j 04:31	0° Z	
	-684 Mar 15 j 06:12	0° Y				-679 Feb 12 j 10:49	7° Z 48'56	
asc. node	-684 Apr 23 j 04:22	27° Y 22'23				-679 Mar 16 j 10:57	0° \mathfrak{E}	
	-684 Apr 27 j 00:10	0° B				-679 Apr 30 j 02:09	0° \approx	
						-679 Jun 23 j 07:23	0° H	
conjunction	-684 May 01 j 04:31	2° B 51'34	0°04'51	retrograde		-679 Jul 29 j 01:17	8° H 07'29	
minimum elong	-684 May 01 j 04:14	2° B 51'05	0°04'51	min. Earth dist.		-679 Aug 24 j 21:24	3° H 23'59	0.41714 AU
behind sun begin	-684 Apr 30 j 06:24	2° B 13'50		greatest brilliancy		-679 Aug 30 j 13:24	1° H 36'24	-2.6m
behind sun end	-684 May 02 j 02:05	3° B 28'18		opposition		-679 Sep 01 j 05:55	1° H 04'08	-5°-20'-43
max. Earth dist.	-684 May 28 j 03:34	21° B 00'19	2.58516 AU			-679 Sep 04 j 16:09	30° $\text{R}\mathfrak{E}$	
	-684 Jun 10 j 18:30	0° II		direct		-679 Oct 02 j 05:34	25° \approx 13'54	
morning rise	-684 Jun 22 j 09:33	7° II 35'46				-679 Oct 30 j 17:24	0° H	
	-684 Jul 27 j 07:19	0° \mathfrak{E}		asc. node		-679 Dec 14 j 00:34	19° H 14'52	
	-684 Sep 13 j 10:09	0° Ω				-678 Jan 02 j 20:34	0° Y	
	-684 Nov 02 j 16:27	0° M				-678 Feb 23 j 01:39	0° B	
	-684 Dec 28 j 18:49	0° $\underline{\text{A}}$				-678 Apr 13 j 07:55	0° II	
retrograde	-683 Mar 06 j 09:51	19° $\underline{\text{A}}$ 41'25				-678 May 31 j 19:53	0° \mathfrak{E}	
opposition	-683 Apr 10 j 06:26	12° $\underline{\text{A}}$ 35'35	1°33'58	evening set		-678 Jul 12 j 03:57	26° \mathfrak{E} 02'09	
greatest brilliancy	-683 Apr 11 j 01:50	12° $\underline{\text{A}}$ 18'37	-2.1m			-678 Jul 18 j 08:58	0° Ω	
min. Earth dist.	-683 Apr 18 j 15:23	9° $\underline{\text{A}}$ 40'24	0.50263 AU	max. Earth dist.		-678 Aug 09 j 08:22	14° Ω 09'43	2.63596 AU
desc. node	-683 May 10 j 11:19	4° $\underline{\text{A}}$ 21'27						
direct	-683 May 18 j 16:27	3° $\underline{\text{A}}$ 53'03		conjunction		-678 Aug 27 j 04:29	25° Ω 50'04	1°02'04
	-683 Jul 30 j 00:03	0° M		minimum elong		-678 Aug 27 j 05:29	25° Ω 51'43	1°02'04
	-683 Sep 13 j 09:16	0° Z				-678 Sep 02 j 11:49	0° M	
	-683 Oct 24 j 05:57	0° \mathfrak{E}		morning rise		-678 Oct 12 j 03:16	26° M 44'12	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 23

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-678 Oct 16 j 21:03	0°♄		opposition	-672 Jan 08 j 02:09	11°♄02'02	4°23'31
	-678 Nov 28 j 12:43	0°♌		greatest brilliancy	-672 Jan 08 j 01:57	11°♄02'14	-1.2m
desc. node	-678 Dec 31 j 10:08	23°♌53'52		min. Earth dist.	-672 Jan 08 j 10:19	10°♄53'52	0.67543 AU
	-677 Jan 08 j 16:37	0°♈		direct	-672 Feb 17 j 20:23	1°♄11'34	
	-677 Feb 17 j 19:45	0°♈			-672 May 13 j 17:29	0°♌	
	-677 Mar 29 j 15:22	0°♊			-672 Jul 04 j 04:56	0°♍	
	-677 May 09 j 07:47	0°♋			-672 Aug 18 j 13:10	0°♌	
	-677 Jun 22 j 06:10	0°♍		desc. node	-672 Aug 22 j 06:14	2°♌34'45	
	-677 Aug 19 j 04:15	0°♊			-672 Sep 29 j 08:15	0°♌	
retrograde	-677 Sep 17 j 22:00	5°♊33'46			-672 Nov 07 j 20:22	0°♈	
	-677 Oct 16 j 02:38	30°♋♍		evening set	-672 Dec 01 j 06:58	18°♈18'37	
min. Earth dist.	-677 Oct 19 j 12:24	28°♍44'40	0.54361 AU		-672 Dec 16 j 02:54	0°♈	
opposition	-677 Oct 26 j 12:28	26°♍03'12	0°-15'-19		-671 Jan 23 j 03:49	0°♊	
greatest brilliancy	-677 Nov 05 j 16:00	22°♍23'10	-1.9m				
asc. node	-677 Oct 31 j 23:22	24°♍00'15		conjunction	-671 Feb 05 j 23:09	10°♊47'32	-1°-4'-14
direct	-677 Dec 01 j 02:06	18°♍05'42		minimum elong	-671 Feb 06 j 00:28	10°♊50'04	1°04'16
	-676 Jan 19 j 09:13	0°♊			-671 Mar 02 j 21:15	0°♋	
	-676 Mar 19 j 20:02	0°♌		max. Earth dist.	-671 Mar 28 j 11:19	19°♋14'50	2.41241 AU
	-676 May 10 j 19:15	0°♍			-671 Apr 12 j 02:18	0°♍	
	-676 Jun 28 j 16:21	0°♌		morning rise	-671 Apr 14 j 10:02	1°♍41'21	
	-676 Aug 14 j 02:19	0°♍			-671 May 24 j 09:25	0°♊	
evening set	-676 Aug 18 j 23:49	3°♍15'31		asc. node	-671 Jun 22 j 20:48	19°♊56'11	
max. Earth dist.	-676 Sep 05 j 16:31	15°♍11'42	2.54798 AU		-671 Jul 08 j 04:57	0°♌	
	-676 Sep 27 j 03:05	0°♌			-671 Aug 25 j 04:11	0°♍	
					-671 Oct 17 j 22:06	0°♌	
conjunction	-676 Oct 06 j 15:17	6°♌41'13	0°25'51	retrograde	-670 Jan 03 j 01:24	24°♌22'55	
minimum elong	-676 Oct 06 j 16:23	6°♌43'09	0°25'50	opposition	-670 Feb 10 j 21:05	15°♌26'15	4°33'44
	-676 Nov 07 j 23:50	0°♌		greatest brilliancy	-670 Feb 11 j 17:13	15°♌06'37	-1.3m
desc. node	-676 Nov 17 j 08:18	6°♌53'35		min. Earth dist.	-670 Feb 15 j 02:09	13°♌47'43	0.64564 AU
morning rise	-676 Nov 27 j 12:33	14°♌27'58		direct	-670 Mar 24 j 05:09	5°♌25'05	
	-676 Dec 18 j 02:51	0°♈			-670 Jun 07 j 10:06	0°♍	
	-675 Jan 26 j 03:00	0°♈		desc. node	-670 Jul 10 j 04:34	19°♍03'08	
	-675 Mar 05 j 18:36	0°♊			-670 Jul 27 j 06:00	0°♌	
	-675 Apr 13 j 23:19	0°♋			-670 Sep 08 j 08:57	0°♌	
	-675 May 24 j 19:56	0°♍			-670 Oct 18 j 08:17	0°♈	
	-675 Jul 08 j 00:45	0°♊			-670 Nov 25 j 20:10	0°♈	
	-675 Aug 29 j 11:28	0°♌			-669 Jan 03 j 02:09	0°♊	
asc. node	-675 Sep 17 j 23:23	8°♌25'26		evening set	-669 Feb 09 j 11:17	28°♊46'19	
retrograde	-675 Oct 25 j 11:10	16°♌15'18			-669 Feb 11 j 02:12	0°♋	
min. Earth dist.	-675 Nov 30 j 23:06	7°♌42'04	0.63966 AU		-669 Mar 23 j 14:55	0°♍	
opposition	-675 Dec 04 j 11:01	6°♌17'52	2°53'10				
greatest brilliancy	-675 Dec 03 j 21:48	6°♌31'08	-1.4m	conjunction	-669 Apr 11 j 20:58	13°♍46'00	0°-17'-34
	-675 Dec 22 j 06:26	30°♋♊		minimum elong	-669 Apr 11 j 22:03	13°♍47'56	0°17'35
direct	-674 Jan 12 j 06:15	27°♊06'35			-669 May 05 j 03:35	0°♊	
	-674 Feb 04 j 02:56	0°♌		asc. node	-669 May 10 j 20:27	3°♊54'47	
	-674 Apr 16 j 19:46	0°♍		max. Earth dist.	-669 May 16 j 22:24	8°♊03'28	2.54323 AU
	-674 Jun 08 j 10:57	0°♌		morning rise	-669 Jun 06 j 14:43	21°♊56'57	
	-674 Jul 26 j 01:34	0°♍			-669 Jun 18 j 19:12	0°♌	
	-674 Sep 08 j 06:57	0°♌			-669 Aug 04 j 11:44	0°♍	
evening set	-674 Oct 03 j 08:10	17°♌52'44			-669 Sep 22 j 08:28	0°♌	
desc. node	-674 Oct 05 j 07:08	19°♌18'07			-669 Nov 14 j 00:46	0°♍	
	-674 Oct 19 j 20:38	0°♌			-668 Jan 25 j 12:18	0°♌	
max. Earth dist.	-674 Oct 21 j 02:28	0°♌55'20	2.42395 AU	retrograde	-668 Feb 14 j 21:46	2°♌18'46	
					-668 Mar 04 j 23:59	30°♋♍	
conjunction	-674 Nov 28 j 16:58	0°♈10'50	0°-34'-34	opposition	-668 Mar 22 j 05:14	24°♍33'04	2°58'20
minimum elong	-674 Nov 28 j 14:49	0°♈06'41	0°34'33	greatest brilliancy	-668 Mar 23 j 10:31	24°♍06'10	-1.8m
	-674 Nov 28 j 11:21	0°♈		min. Earth dist.	-668 Mar 29 j 20:27	21°♍45'09	0.55244 AU
	-673 Jan 05 j 22:24	0°♈		direct	-668 May 01 j 02:39	15°♍09'36	
morning rise	-673 Feb 01 j 15:25	21°♈00'30		desc. node	-668 May 27 j 03:50	19°♍16'27	
	-673 Feb 13 j 02:36	0°♊			-668 Jun 23 j 00:41	0°♌	
	-673 Mar 23 j 21:07	0°♋			-668 Aug 12 j 20:10	0°♌	
	-673 May 03 j 02:52	0°♍			-668 Sep 24 j 03:02	0°♈	
	-673 Jun 14 j 16:39	0°♊			-668 Nov 02 j 18:28	0°♈	
	-673 Jul 30 j 18:36	0°♌			-668 Dec 11 j 20:46	0°♊	
asc. node	-673 Aug 05 j 22:34	3°♌46'42			-667 Jan 20 j 15:39	0°♋	
	-673 Sep 21 j 21:29	0°♍			-667 Mar 02 j 22:29	0°♍	
retrograde	-673 Nov 29 j 03:07	20°♍40'43		asc. node	-667 Mar 27 j 19:16	17°♍26'36	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 24

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

evening set	-667 Apr 06 j 15:02	24°♊12'31			-662 Feb 26 j 23:37	0°♊	
	-667 Apr 15 j 02:41	0°♊			-662 Apr 08 j 19:04	0°♊	
					-662 May 21 j 02:38	0°♊	
conjunction	-667 May 29 j 01:24	29°♊17'48	0°34'50		-662 Jul 09 j 01:07	0°♊	
minimum elong	-667 May 29 j 00:06	29°♊15'40	0°34'50	retrograde	-662 Aug 31 j 06:20	16°♊08'43	
	-667 May 30 j 03:12	0°♊		min. Earth dist.	-662 Sep 29 j 16:28	10°♊10'42	0.49384 AU
max. Earth dist.	-667 Jun 13 j 23:51	9°♊40'45	2.63473 AU	opposition	-662 Oct 07 j 15:04	7°♊16'31	-2°-3'-53
	-667 Jul 15 j 14:32	0°♊		greatest brilliancy	-662 Oct 06 j 18:54	7°♊35'02	-2.1m
morning rise	-667 Jul 16 j 08:47	0°♊29'07		direct	-662 Nov 10 j 13:07	0°♊02'32	
	-667 Sep 01 j 00:52	0°♊		asc. node	-662 Nov 17 j 16:05	0°♊22'07	
	-667 Oct 19 j 05:31	0°♊			-661 Feb 04 j 20:07	0°♊	
	-667 Dec 07 j 20:19	0°♊			-661 Mar 30 j 09:10	0°♊	
	-666 Jan 31 j 00:20	0°♊			-661 May 19 j 13:18	0°♊	
retrograde	-666 Apr 14 j 16:37	23°♊13'20			-661 Jul 06 j 18:40	0°♊	
desc. node	-666 Apr 14 j 03:32	23°♊13'14		evening set	-661 Aug 04 j 11:40	18°♊27'53	
opposition	-666 May 16 j 19:32	17°♊24'47	-2°00'-30		-661 Aug 22 j 00:28	0°♊	
greatest brilliancy	-666 May 17 j 14:26	17°♊10'23	-2.5m	max. Earth dist.	-661 Aug 25 j 19:58	2°♊32'06	2.58801 AU
min. Earth dist.	-666 May 24 j 05:35	15°♊09'48	0.42317 AU				
direct	-666 Jun 20 j 09:43	10°♊31'03		conjunction	-661 Sep 20 j 15:26	19°♊58'41	0°43'26
	-666 Aug 18 j 20:41	0°♊		minimum elong	-661 Sep 20 j 16:48	20°♊01'01	0°43'26
	-666 Oct 05 j 06:24	0°♊			-661 Oct 05 j 03:39	0°♊	
	-666 Nov 16 j 20:59	0°♊		morning rise	-661 Nov 08 j 10:39	24°♊19'29	
	-666 Dec 28 j 23:56	0°♊			-661 Nov 16 j 06:31	0°♊	
	-665 Feb 10 j 00:59	0°♊		desc. node	-661 Dec 05 j 00:51	13°♊46'56	
asc. node	-665 Feb 12 j 17:06	1°♊49'49			-661 Dec 26 j 17:33	0°♊	
	-665 Mar 26 j 13:08	0°♊			-660 Feb 04 j 01:54	0°♊	
	-665 May 11 j 11:10	0°♊			-660 Mar 14 j 01:15	0°♊	
evening set	-665 May 21 j 00:09	6°♊08'39			-660 Apr 22 j 14:28	0°♊	
	-665 Jun 27 j 07:19	0°♊			-660 Jun 03 j 01:50	0°♊	
					-660 Jul 19 j 01:54	0°♊	
conjunction	-665 Jul 07 j 14:25	6°♊33'33	1°04'34		-660 Sep 24 j 16:55	0°♊	
minimum elong	-665 Jul 07 j 13:32	6°♊32'09	1°04'34	asc. node	-660 Oct 04 j 14:51	1°♊27'35	
max. Earth dist.	-665 Jul 08 j 03:58	6°♊55'07	2.67294 AU	retrograde	-660 Oct 11 j 06:49	1°♊45'24	
	-665 Aug 13 j 08:50	0°♊			-660 Oct 26 j 23:57	30°♊	
morning rise	-665 Aug 21 j 16:27	5°♊19'12		min. Earth dist.	-660 Nov 15 j 00:24	23°♊48'16	0.60870 AU
	-665 Sep 29 j 01:16	0°♊		opposition	-660 Nov 19 j 22:55	21°♊50'14	1°53'54
	-665 Nov 14 j 02:38	0°♊		greatest brilliancy	-660 Nov 19 j 10:16	22°♊02'51	-1.6m
	-665 Dec 29 j 15:44	0°♊		direct	-660 Dec 27 j 15:19	13°♊02'40	
	-664 Feb 13 j 04:03	0°♊			-659 Feb 27 j 13:20	0°♊	
desc. node	-664 Mar 01 j 02:40	11°♊01'52			-659 Apr 26 j 15:49	0°♊	
	-664 Mar 31 j 01:07	0°♊			-659 Jun 16 j 07:46	0°♊	
	-664 May 25 j 21:35	0°♊			-659 Aug 02 j 07:59	0°♊	
retrograde	-664 Jul 02 j 16:04	8°♊32'46		evening set	-659 Sep 14 j 10:38	29°♊18'16	
min. Earth dist.	-664 Jul 29 j 21:57	4°♊04'38	0.38302 AU		-659 Sep 15 j 10:28	0°♊	
greatest brilliancy	-664 Aug 02 j 00:37	3°♊12'45	-2.8m	max. Earth dist.	-659 Sep 29 j 07:40	9°♊49'19	2.47458 AU
opposition	-664 Aug 03 j 03:22	2°♊54'04	-6°-46'-35	desc. node	-659 Oct 21 j 23:11	26°♊13'29	
	-664 Aug 14 j 08:31	30°♊			-659 Oct 27 j 02:14	0°♊	
direct	-664 Sep 01 j 21:25	27°♊50'04					
	-664 Sep 20 j 08:54	0°♊		conjunction	-659 Nov 06 j 00:42	7°♊22'48	0°-9'-50
	-664 Nov 26 j 13:07	0°♊		minimum elong	-659 Nov 06 j 00:07	7°♊21'43	0°09'51
asc. node	-664 Dec 30 j 16:19	20°♊21'34		behind sun begin	-659 Nov 05 j 05:08	6°♊46'17	
	-663 Jan 15 j 06:49	0°♊		behind sun end	-659 Nov 06 j 19:07	7°♊57'11	
	-663 Mar 04 j 04:59	0°♊			-659 Dec 05 j 21:08	0°♊	
	-663 Apr 21 j 01:14	0°♊		morning rise	-658 Jan 04 j 05:46	22°♊44'53	
	-663 Jun 07 j 21:10	0°♊			-658 Jan 13 j 12:23	0°♊	
evening set	-663 Jun 27 j 15:16	12°♊27'50			-658 Feb 20 j 19:51	0°♊	
	-663 Jul 25 j 04:20	0°♊		greatest brilliancy	-658 Mar 21 j 21:32	22°♊31'03	1.2m
max. Earth dist.	-663 Jul 30 j 16:24	3°♊31'56	2.65674 AU		-658 Mar 31 j 16:39	0°♊	
					-658 May 11 j 01:03	0°♊	
conjunction	-663 Aug 12 j 13:12	11°♊49'56	1°08'07		-658 Jun 22 j 22:52	0°♊	
minimum elong	-663 Aug 12 j 13:42	11°♊50'45	1°08'07		-658 Aug 09 j 05:59	0°♊	
	-663 Sep 09 j 08:22	0°♊		asc. node	-658 Aug 22 j 13:47	7°♊39'37	
morning rise	-663 Sep 26 j 13:54	11°♊26'39			-658 Oct 08 j 12:26	0°♊	
	-663 Oct 24 j 00:54	0°♊		retrograde	-658 Nov 15 j 18:50	7°♊49'01	
	-663 Dec 06 j 04:54	0°♊			-658 Dec 20 j 20:35	30°♊	
desc. node	-662 Jan 17 j 01:54	0°♊01'17		opposition	-658 Dec 25 j 21:15	27°♊59'40	3°58'15
	-662 Jan 17 j 01:12	0°♊		min. Earth dist.	-658 Dec 24 j 17:06	28°♊27'56	0.66921 AU

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 25

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

greatest brilliancy	-658 Dec 25 j 14:19	28° Π 06'38	-1.3m			-652 Mar 10 j 10:33	0° Υ	
direct	-657 Feb 04 j 00:33	18° Π 21'12		evening set		-652 Mar 17 j 07:47	4° Υ 55'05	
	-657 Mar 25 j 19:51	0° \mathfrak{S}		asc. node		-652 Apr 13 j 10:31	23° Υ 55'22	
	-657 May 25 j 00:27	0° Ω				-652 Apr 22 j 06:45	0° \mathfrak{B}	
	-657 Jul 13 j 09:46	0° \mathfrak{M}						
	-657 Aug 27 j 04:03	0° $\underline{\mathfrak{A}}$		conjunction		-652 May 11 j 19:30	13° \mathfrak{B} 13'58	0°16'45
desc. node	-657 Sep 08 j 22:18	8° $\underline{\mathfrak{A}}$ 59'24		minimum elong		-652 May 11 j 18:42	13° \mathfrak{B} 12'37	0°16'46
	-657 Oct 07 j 19:34	0° \mathfrak{M}		max. Earth dist.		-652 Jun 03 j 15:20	28° \mathfrak{B} 23'40	2.60498 AU
evening set	-657 Nov 06 j 18:32	22° \mathfrak{M} 38'02				-652 Jun 06 j 01:58	0° Π	
	-657 Nov 16 j 07:51	0° \mathfrak{X}		morning rise		-652 Jul 01 j 10:13	16° Π 28'47	
	-657 Dec 24 j 15:20	0° \mathfrak{Z}				-652 Jul 22 j 13:08	0° \mathfrak{S}	
						-652 Sep 08 j 08:13	0° Ω	
conjunction	-656 Jan 09 j 06:54	12° \mathfrak{Z} 21'06	-1°-2'-54			-652 Oct 27 j 15:56	0° \mathfrak{M}	
minimum elong	-656 Jan 09 j 05:12	12° \mathfrak{Z} 17'45	1°02'55			-652 Dec 19 j 11:21	0° $\underline{\mathfrak{A}}$	
max. Earth dist.	-656 Jan 22 j 23:31	23° \mathfrak{Z} 08'58	2.37338 AU			-651 Mar 05 j 11:27	0° \mathfrak{M}	
	-656 Jan 31 j 16:42	0° \approx		retrograde		-651 Mar 19 j 09:56	1° \mathfrak{M} 08'26	
	-656 Mar 10 j 09:37	0° \mathfrak{X}				-651 Apr 01 j 21:00	30° \mathfrak{R} $\underline{\mathfrak{A}}$	
morning rise	-656 Mar 18 j 23:00	6° \mathfrak{X} 30'17		opposition		-651 Apr 22 j 09:29	24° $\underline{\mathfrak{A}}$ 28'19	0°28'04
	-656 Apr 19 j 13:29	0° Υ		greatest brilliancy		-651 Apr 22 j 15:54	24° $\underline{\mathfrak{A}}$ 22'56	-2.2m
	-656 May 31 j 20:47	0° \mathfrak{B}		desc. node		-651 Apr 30 j 19:02	21° $\underline{\mathfrak{A}}$ 39'41	
asc. node	-656 Jul 09 j 13:10	25° \mathfrak{B} 52'27		min. Earth dist.		-651 Apr 30 j 20:05	21° $\underline{\mathfrak{A}}$ 38'49	0.47354 AU
	-656 Jul 15 j 22:36	0° Π		direct		-651 May 29 j 15:38	16° $\underline{\mathfrak{A}}$ 18'33	
	-656 Sep 03 j 00:44	0° \mathfrak{S}				-651 Jul 17 j 15:24	0° \mathfrak{M}	
	-656 Nov 01 j 10:53	0° Ω				-651 Sep 05 j 13:39	0° \mathfrak{X}	
retrograde	-656 Dec 19 j 15:20	11° Ω 14'58				-651 Oct 17 j 17:12	0° \mathfrak{Z}	
opposition	-655 Jan 28 j 00:56	1° Ω 59'03	4°39'37			-651 Nov 27 j 05:31	0° \approx	
greatest brilliancy	-655 Jan 28 j 13:05	1° Ω 47'03	-1.3m			-650 Jan 07 j 01:39	0° \mathfrak{X}	
min. Earth dist.	-655 Jan 30 j 17:39	0° Ω 55'09	0.66530 AU			-650 Feb 18 j 04:40	0° Υ	
	-655 Feb 02 j 01:55	30° \mathfrak{R} \mathfrak{S}		asc. node		-650 Mar 01 j 10:09	7° Υ 47'58	
direct	-655 Mar 10 j 07:55	21° \mathfrak{S} 58'05				-650 Apr 03 j 00:46	0° \mathfrak{B}	
	-655 Apr 18 j 23:13	0° Ω		evening set		-650 May 04 j 17:34	21° \mathfrak{B} 00'52	
	-655 Jun 18 j 22:38	0° \mathfrak{M}				-650 May 18 j 11:56	0° Π	
desc. node	-655 Jul 26 j 22:08	23° \mathfrak{M} 46'45						
	-655 Aug 05 j 05:11	0° $\underline{\mathfrak{A}}$		conjunction		-650 Jun 22 j 19:18	22° Π 45'50	0°56'04
	-655 Sep 16 j 14:43	0° \mathfrak{M}		minimum elong		-650 Jun 22 j 18:03	22° Π 43'50	0°56'04
	-655 Oct 26 j 07:31	0° \mathfrak{X}		max. Earth dist.		-650 Jun 29 j 04:35	26° Π 51'01	2.66437 AU
greatest brilliancy	-655 Nov 04 j 11:57	7° \mathfrak{X} 07'36	1.2m			-650 Jul 04 j 02:53	0° \mathfrak{S}	
	-655 Dec 03 j 15:42	0° \mathfrak{Z}		morning rise		-650 Aug 07 j 18:19	22° \mathfrak{S} 04'00	
	-654 Jan 10 j 18:15	0° \approx				-650 Aug 20 j 05:45	0° Ω	
evening set	-654 Jan 13 j 17:21	2° \approx 18'59				-650 Oct 06 j 08:27	0° \mathfrak{M}	
	-654 Feb 18 j 14:23	0° \mathfrak{X}				-650 Nov 22 j 09:01	0° $\underline{\mathfrak{A}}$	
						-649 Jan 08 j 18:52	0° \mathfrak{M}	
conjunction	-654 Mar 19 j 21:38	21° \mathfrak{X} 55'26	0°-40'-6			-649 Feb 27 j 03:16	0° \mathfrak{X}	
minimum elong	-654 Mar 20 j 00:08	22° \mathfrak{X} 00'02	0°40'05	desc. node		-649 Mar 18 j 18:56	11° \mathfrak{X} 04'37	
	-654 Mar 30 j 22:40	0° Υ				-649 Apr 28 j 02:56	0° \mathfrak{Z}	
max. Earth dist.	-654 May 02 j 08:04	23° Υ 04'23	2.49482 AU	retrograde		-649 Jun 02 j 14:30	7° \mathfrak{Z} 09'06	
	-654 May 12 j 07:37	0° \mathfrak{B}		opposition		-649 Jul 02 j 21:09	2° \mathfrak{Z} 09'58	-6°-11'-1
morning rise	-654 May 19 j 00:43	4° \mathfrak{B} 36'48		greatest brilliancy		-649 Jul 03 j 03:03	2° \mathfrak{Z} 06'03	-2.9m
asc. node	-654 May 27 j 11:15	10° \mathfrak{B} 21'44		min. Earth dist.		-649 Jul 03 j 20:07	1° \mathfrak{Z} 54'44	0.37609 AU
	-654 Jun 25 j 22:27	0° Π				-649 Jul 11 j 07:51	30° \mathfrak{R} \mathfrak{X}	
	-654 Aug 11 j 22:06	0° \mathfrak{S}		direct		-649 Aug 02 j 01:54	27° \mathfrak{X} 05'23	
	-654 Sep 30 j 22:24	0° Ω				-649 Aug 23 j 09:45	0° \mathfrak{Z}	
	-654 Nov 27 j 05:05	0° \mathfrak{M}				-649 Oct 25 j 10:50	0° \approx	
retrograde	-653 Jan 27 j 22:03	16° \mathfrak{M} 49'21				-649 Dec 11 j 18:27	0° \mathfrak{X}	
opposition	-653 Mar 06 j 09:40	8° \mathfrak{M} 31'07	3°51'54	asc. node		-648 Jan 17 j 08:28	24° \mathfrak{X} 00'08	
greatest brilliancy	-653 Mar 07 j 14:46	8° \mathfrak{M} 03'33	-1.6m			-648 Jan 26 j 11:48	0° Υ	
min. Earth dist.	-653 Mar 12 j 19:48	6° \mathfrak{M} 05'14	0.59612 AU			-648 Mar 12 j 14:23	0° \mathfrak{B}	
	-653 Apr 02 j 10:34	30° \mathfrak{R} Ω				-648 Apr 28 j 11:34	0° Π	
direct	-653 Apr 16 j 04:26	28° Ω 43'58		evening set		-648 Jun 12 j 22:32	28° Π 48'21	
	-653 Apr 30 j 11:02	0° \mathfrak{M}				-648 Jun 14 j 19:46	0° \mathfrak{S}	
desc. node	-653 Jun 13 j 20:37	15° \mathfrak{M} 48'01		max. Earth dist.		-648 Jul 21 j 09:22	23° \mathfrak{S} 14'19	2.66942 AU
	-653 Jul 09 j 17:49	0° $\underline{\mathfrak{A}}$						
	-653 Aug 24 j 14:20	0° \mathfrak{M}		conjunction		-648 Jul 29 j 04:25	28° \mathfrak{S} 13'14	1°09'57
	-653 Oct 04 j 13:10	0° \mathfrak{X}		minimum elong		-648 Jul 29 j 04:22	28° \mathfrak{S} 13'10	1°09'56
	-653 Nov 12 j 13:08	0° \mathfrak{Z}				-648 Jul 31 j 23:06	0° Ω	
	-653 Dec 21 j 04:13	0° \approx		morning rise		-648 Sep 11 j 20:42	27° Ω 07'01	
	-652 Jan 29 j 13:08	0° \mathfrak{X}				-648 Sep 16 j 06:19	0° \mathfrak{M}	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 26

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-648 Oct 31 j 08:57	0°♄		opposition	-643 Dec 12 j 10:22	14°♊39'02	3°20'57
	-648 Dec 14 j 05:44	0°♌		greatest brilliancy	-643 Dec 11 j 22:33	14°♊50'55	-1.3m
	-647 Jan 26 j 01:26	0°♊		direct	-642 Jan 20 j 18:13	5°♊16'54	
desc. node	-647 Feb 02 j 18:22	5°♊27'35			-642 Apr 09 j 10:44	0°♉	
	-647 Mar 09 j 06:14	0°♉			-642 Jun 02 j 23:18	0°♏	
	-647 Apr 20 j 22:10	0°♈			-642 Jul 21 j 03:24	0°♎	
	-647 Jun 06 j 09:49	0°♋			-642 Sep 03 j 13:40	0°♌	
retrograde	-647 Aug 11 j 00:39	23°♋17'24		desc. node	-642 Sep 25 j 15:40	15°♌42'07	
min. Earth dist.	-647 Sep 07 j 11:36	18°♋11'19	0.44272 AU	evening set	-642 Oct 14 j 23:18	29°♌50'32	
greatest brilliancy	-647 Sep 14 j 00:00	16°♋00'00	-2.4m		-642 Oct 15 j 04:24	0°♌	
opposition	-647 Sep 15 j 12:42	15°♋29'00	-4°-9'-44	max. Earth dist.	-642 Nov 07 j 08:17	17°♌24'14	2.39817 AU
direct	-647 Oct 17 j 12:57	9°♋08'00			-642 Nov 23 j 18:36	0°♊	
asc. node	-647 Dec 04 j 07:10	20°♋56'42					
	-647 Dec 23 j 20:48	0°♐		conjunction	-642 Dec 12 j 19:43	14°♊48'24	0°-47'-19
	-646 Feb 16 j 13:23	0°♏		minimum elong	-642 Dec 12 j 17:01	14°♊43'07	0°47'18
	-646 Apr 07 j 23:00	0°♏			-641 Jan 01 j 04:18	0°♉	
	-646 May 26 j 23:09	0°♏			-641 Feb 08 j 06:55	0°♈	
	-646 Jul 13 j 17:30	0°♏		morning rise	-641 Feb 18 j 11:48	7°♈58'47	
evening set	-646 Jul 20 j 13:24	4°♏22'04			-641 Mar 18 j 23:59	0°♋	
max. Earth dist.	-646 Aug 15 j 04:09	20°♏57'42	2.62086 AU		-641 Apr 28 j 03:40	0°♐	
	-646 Aug 28 j 21:20	0°♎			-641 Jun 09 j 13:03	0°♏	
					-641 Jul 25 j 02:25	0°♏	
conjunction	-646 Sep 04 j 20:30	4°♎37'55	0°56'32	asc. node	-641 Jul 27 j 03:51	1°♏17'40	
minimum elong	-646 Sep 04 j 21:42	4°♎39'56	0°56'31		-641 Sep 14 j 03:34	0°♏	
	-646 Oct 12 j 04:30	0°♌		retrograde	-641 Dec 06 j 21:37	28°♏27'33	
morning rise	-646 Oct 21 j 14:32	6°♌33'00		opposition	-640 Jan 15 j 16:41	18°♏55'59	4°32'52
	-646 Nov 23 j 15:22	0°♌		greatest brilliancy	-640 Jan 15 j 20:44	18°♏51'56	-1.2m
desc. node	-646 Dec 21 j 17:02	20°♌29'10		min. Earth dist.	-640 Jan 16 j 20:58	18°♏27'48	0.67468 AU
	-645 Jan 03 j 12:54	0°♊		direct	-640 Feb 25 j 16:33	9°♏00'34	
	-645 Feb 12 j 08:32	0°♉			-640 May 05 j 20:55	0°♏	
	-645 Mar 23 j 19:25	0°♈			-640 Jun 28 j 12:23	0°♎	
	-645 May 02 j 23:04	0°♋		desc. node	-640 Aug 12 j 14:08	29°♎24'27	
	-645 Jun 14 j 14:45	0°♐			-640 Aug 13 j 10:50	0°♌	
	-645 Aug 03 j 23:35	0°♏			-640 Sep 24 j 10:48	0°♌	
retrograde	-645 Sep 27 j 03:32	15°♏51'50			-640 Nov 03 j 00:45	0°♊	
asc. node	-645 Oct 22 j 07:02	11°♏22'57			-640 Dec 11 j 07:52	0°♉	
min. Earth dist.	-645 Oct 29 j 22:00	8°♏36'34	0.56885 AU	evening set	-640 Dec 16 j 16:11	4°♉13'20	
opposition	-645 Nov 05 j 05:09	6°♏08'43	0°37'28		-639 Jan 18 j 09:01	0°♈	
greatest brilliancy	-645 Nov 04 j 23:24	6°♏14'22	-1.8m				
	-645 Nov 23 j 17:12	30°♐♐		conjunction	-639 Feb 21 j 17:54	26°♈39'44	0°-58'-23
direct	-645 Dec 11 j 13:52	27°♐51'19		minimum elong	-639 Feb 21 j 20:25	26°♈44'33	0°58'24
	-645 Dec 30 j 18:27	0°♏			-639 Feb 26 j 02:48	0°♋	
	-644 Mar 12 j 19:50	0°♏			-639 Apr 07 j 08:00	0°♐	
	-644 May 05 j 09:18	0°♏		max. Earth dist.	-639 Apr 12 j 15:36	3°♐51'47	2.44152 AU
	-644 Jun 23 j 19:46	0°♏		morning rise	-639 Apr 27 j 19:18	14°♐43'48	
	-644 Aug 09 j 10:42	0°♎			-639 May 19 j 14:19	0°♏	
evening set	-644 Aug 28 j 05:01	12°♎34'04		asc. node	-639 Jun 13 j 03:55	16°♏42'45	
max. Earth dist.	-644 Sep 13 j 08:47	23°♎37'53	2.52315 AU		-639 Jul 03 j 06:15	0°♏	
	-644 Sep 22 j 12:29	0°♌			-639 Aug 19 j 17:34	0°♏	
					-639 Oct 10 j 15:01	0°♏	
conjunction	-644 Oct 17 j 00:21	17°♌24'01	0°13'50		-639 Dec 21 j 02:41	0°♎	
minimum elong	-644 Oct 17 j 01:02	17°♌25'14	0°13'50	retrograde	-638 Jan 11 j 18:00	2°♎35'45	
behind sun begin	-644 Oct 16 j 13:22	17°♌04'14			-638 Jan 31 j 21:27	30°♐♐	
behind sun end	-644 Oct 17 j 12:41	17°♌46'14		opposition	-638 Feb 19 j 03:23	23°♏51'18	4°23'18
	-644 Nov 03 j 07:36	0°♌		greatest brilliancy	-638 Feb 20 j 03:23	23°♏28'04	-1.4m
desc. node	-644 Nov 07 j 16:32	3°♌13'17		min. Earth dist.	-638 Feb 24 j 03:50	21°♏54'49	0.63069 AU
morning rise	-644 Dec 10 j 04:11	27°♌36'08		direct	-638 Apr 01 j 08:34	13°♏52'37	
	-644 Dec 13 j 07:41	0°♊			-638 May 29 j 05:22	0°♎	
	-643 Jan 21 j 04:16	0°♉		desc. node	-638 Jun 30 j 12:46	17°♎20'54	
	-643 Feb 28 j 16:12	0°♈			-638 Jul 21 j 01:04	0°♌	
	-643 Apr 08 j 17:00	0°♋			-638 Sep 02 j 21:34	0°♌	
	-643 May 19 j 07:11	0°♐			-638 Oct 13 j 03:46	0°♊	
	-643 Jul 01 j 20:06	0°♏			-638 Nov 20 j 19:05	0°♉	
	-643 Aug 20 j 11:59	0°♏			-638 Dec 29 j 03:22	0°♈	
asc. node	-643 Sep 08 j 05:27	9°♏27'20			-637 Feb 06 j 05:38	0°♋	
retrograde	-643 Nov 02 j 08:24	24°♏35'02		evening set	-637 Feb 23 j 12:41	12°♋56'19	
min. Earth dist.	-643 Dec 09 j 18:11	15°♏43'34	0.65303 AU		-637 Mar 18 j 20:24	0°♐	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 27

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

conjunction	-637 Apr 23 j 16:57	25° Υ 21'10	0°-4'-31		-633 Dec 23 j 19:00	0° \mathbb{M}	
minimum elong	-637 Apr 23 j 17:14	25° Υ 21'39	0°04'33		-632 Feb 06 j 01:49	0° \mathcal{A}	
behind sun begin	-637 Apr 22 j 18:34	24° Υ 42'24		desc. node	-632 Feb 20 j 10:54	9° \mathcal{A} 45'25	
behind sun end	-637 Apr 24 j 15:53	26° Υ 00'51			-632 Mar 21 j 13:07	0° \mathcal{C}	
	-637 Apr 30 j 10:37	0° \mathcal{B}			-632 May 07 j 19:43	0° \approx	
asc. node	-637 May 01 j 03:06	0° \mathcal{B} 28'19		retrograde	-632 Jul 18 j 03:39	26° \approx 09'00	
max. Earth dist.	-637 May 24 j 04:48	16° \mathcal{B} 07'43	2.56729 AU	min. Earth dist.	-632 Aug 13 j 20:09	21° \approx 38'15	0.39929 AU
	-637 Jun 14 j 02:20	0° \mathbb{I}		greatest brilliancy	-632 Aug 18 j 13:29	20° \approx 13'34	-2.7m
morning rise	-637 Jun 16 j 09:14	1° \mathbb{I} 30'10		opposition	-632 Aug 20 j 03:23	19° \approx 45'04	-6°-7'-53
	-637 Jul 30 j 15:24	0° \mathcal{E}		direct	-632 Sep 19 j 10:39	14° \approx 18'23	
	-637 Sep 17 j 00:00	0° \mathcal{Q}			-632 Nov 13 j 22:44	0° \mathcal{H}	
	-637 Nov 07 j 01:59	0° \mathbb{P}		asc. node	-632 Dec 20 j 23:00	19° \mathcal{H} 35'40	
	-636 Jan 05 j 20:56	0° \mathcal{A}			-631 Jan 07 j 20:39	0° Υ	
retrograde	-636 Feb 26 j 03:59	12° \mathcal{A} 21'56			-631 Feb 26 j 08:59	0° \mathcal{B}	
opposition	-636 Apr 01 j 17:10	4° \mathcal{A} 57'03	2°13'54		-631 Apr 15 j 22:35	0° \mathbb{I}	
greatest brilliancy	-636 Apr 02 j 18:13	4° \mathcal{A} 34'34	-1.9m		-631 Jun 03 j 03:07	0° \mathcal{E}	
min. Earth dist.	-636 Apr 09 j 19:47	2° \mathcal{A} 03'03	0.52561 AU	evening set	-631 Jul 05 j 23:02	20° \mathcal{E} 41'14	
	-636 Apr 16 j 00:43	30° \mathcal{R} \mathbb{P}			-631 Jul 20 j 13:47	0° \mathcal{Q}	
direct	-636 May 10 j 20:32	25° \mathbb{P} 53'41		max. Earth dist.	-631 Aug 05 j 05:32	10° \mathcal{Q} 03'56	2.64633 AU
desc. node	-636 May 17 j 11:45	26° \mathbb{P} 11'23					
	-636 Jun 05 j 15:30	0° \mathcal{A}		conjunction	-631 Aug 20 j 20:52	20° \mathcal{Q} 13'33	1°05'07
	-636 Aug 04 j 23:08	0° \mathbb{M}		minimum elong	-631 Aug 20 j 21:41	20° \mathcal{Q} 14'53	1°05'06
	-636 Sep 17 j 17:28	0° \mathcal{A}			-631 Sep 04 j 17:52	0° \mathbb{P}	
	-636 Oct 27 j 23:35	0° \mathcal{C}		morning rise	-631 Oct 05 j 07:44	20° \mathbb{P} 27'57	
	-636 Dec 06 j 10:27	0° \approx			-631 Oct 19 j 07:12	0° \mathcal{A}	
	-635 Jan 15 j 11:51	0° \mathcal{H}			-631 Dec 01 j 04:56	0° \mathbb{M}	
	-635 Feb 25 j 23:53	0° Υ		desc. node	-630 Jan 07 j 10:27	26° \mathbb{M} 53'23	
asc. node	-635 Mar 18 j 01:27	14° Υ 03'02			-630 Jan 11 j 16:20	0° \mathcal{A}	
	-635 Apr 10 j 08:09	0° \mathcal{B}			-630 Feb 21 j 03:33	0° \mathcal{C}	
evening set	-635 Apr 17 j 06:29	4° \mathcal{B} 40'47			-630 Apr 02 j 07:52	0° \approx	
	-635 May 25 j 11:19	0° \mathbb{I}			-630 May 13 j 12:56	0° \mathcal{H}	
					-630 Jun 27 j 19:12	0° Υ	
conjunction	-635 Jun 07 j 08:03	8° \mathbb{I} 22'24	0°43'43	retrograde	-630 Sep 10 j 15:09	28° Υ 00'44	
minimum elong	-635 Jun 07 j 06:40	8° \mathbb{I} 20'10	0°43'43	min. Earth dist.	-630 Oct 11 j 06:18	21° Υ 33'27	0.52184 AU
max. Earth dist.	-635 Jun 19 j 16:53	16° \mathbb{I} 22'01	2.64761 AU	opposition	-630 Oct 18 j 17:30	18° Υ 44'17	0°-58'-45
	-635 Jul 10 j 23:03	0° \mathcal{E}		greatest brilliancy	-630 Oct 18 j 07:55	18° Υ 53'22	-2.0m
morning rise	-635 Jul 24 j 15:36	8° \mathcal{E} 43'33		asc. node	-630 Nov 07 j 21:31	12° Υ 32'26	
	-635 Aug 27 j 05:34	0° \mathcal{Q}		direct	-630 Nov 22 j 13:38	11° Υ 04'58	
	-635 Oct 13 j 22:53	0° \mathbb{P}			-629 Jan 26 j 10:36	0° \mathcal{B}	
	-635 Dec 01 j 09:31	0° \mathcal{A}			-629 Mar 24 j 06:05	0° \mathbb{I}	
	-634 Jan 21 j 02:14	0° \mathbb{M}			-629 May 14 j 09:38	0° \mathcal{E}	
	-634 Mar 23 j 08:30	0° \mathcal{A}			-629 Jul 02 j 00:19	0° \mathcal{Q}	
desc. node	-634 Apr 04 j 10:26	3° \mathcal{A} 58'26		evening set	-629 Aug 13 j 06:06	27° \mathcal{Q} 15'42	
retrograde	-634 May 01 j 14:26	8° \mathcal{A} 06'30			-629 Aug 17 j 09:27	0° \mathbb{P}	
opposition	-634 Jun 01 j 15:51	2° \mathcal{A} 44'28	-3°-39'-18	max. Earth dist.	-629 Sep 01 j 13:32	10° \mathbb{P} 08'36	2.56679 AU
greatest brilliancy	-634 Jun 02 j 15:53	2° \mathcal{A} 27'13	-2.7m				
min. Earth dist.	-634 Jun 07 j 10:40	1° \mathcal{A} 05'01	0.40016 AU	conjunction	-629 Sep 30 j 03:23	29° \mathbb{P} 44'10	0°33'50
	-634 Jun 11 j 09:36	30° \mathcal{R} \mathbb{M}		minimum elong	-629 Sep 30 j 04:38	29° \mathbb{P} 46'21	0°33'49
direct	-634 Jul 04 j 14:31	26° \mathbb{M} 36'52			-629 Sep 30 j 12:28	0° \mathcal{A}	
	-634 Jul 27 j 05:55	0° \mathcal{A}			-629 Nov 11 j 12:54	0° \mathbb{M}	
	-634 Sep 25 j 13:01	0° \mathcal{C}		morning rise	-629 Nov 19 j 11:51	5° \mathbb{M} 50'03	
	-634 Nov 09 j 13:54	0° \approx		desc. node	-629 Nov 25 j 08:37	10° \mathbb{M} 09'47	
	-634 Dec 22 j 20:18	0° \mathcal{H}			-629 Dec 21 j 20:12	0° \mathcal{A}	
asc. node	-633 Feb 03 j 00:23	28° \mathcal{H} 56'30			-628 Jan 30 j 00:19	0° \mathcal{C}	
	-633 Feb 04 j 13:51	0° Υ			-628 Mar 08 j 19:00	0° \approx	
	-633 Mar 21 j 12:24	0° \mathcal{B}			-628 Apr 17 j 02:25	0° \mathcal{H}	
	-633 May 06 j 16:55	0° \mathbb{I}			-628 May 28 j 03:02	0° Υ	
evening set	-633 May 29 j 21:06	14° \mathbb{I} 50'02			-628 Jul 11 j 19:59	0° \mathcal{B}	
	-633 Jun 22 j 16:31	0° \mathcal{E}			-628 Sep 05 j 06:06	0° \mathbb{I}	
max. Earth dist.	-633 Jul 13 j 10:21	13° \mathcal{E} 12'04	2.67403 AU	asc. node	-628 Sep 24 j 21:19	6° \mathbb{I} 59'00	
				retrograde	-628 Oct 19 j 12:48	10° \mathbb{I} 39'16	
conjunction	-633 Jul 15 j 20:54	14° \mathcal{E} 45'15	1°07'41	min. Earth dist.	-628 Nov 24 j 05:49	2° \mathbb{I} 21'41	0.62689 AU
minimum elong	-633 Jul 15 j 20:18	14° \mathcal{E} 44'19	1°07'41	opposition	-628 Nov 28 j 09:33	0° \mathbb{I} 41'46	2°30'25
	-633 Aug 08 j 18:11	0° \mathcal{Q}		greatest brilliancy	-628 Nov 27 j 19:48	0° \mathbb{I} 55'33	-1.5m
morning rise	-633 Aug 29 j 16:17	13° \mathcal{Q} 25'39			-628 Nov 30 j 03:24	30° \mathcal{R} \mathcal{B}	
	-633 Sep 24 j 06:57	0° \mathbb{P}		direct	-627 Jan 05 j 17:07	21° \mathcal{B} 40'31	
	-633 Nov 08 j 23:05	0° \mathcal{A}			-627 Feb 15 j 14:05	0° \mathbb{I}	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 28

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-627 Apr 20 j 08:44	0°☿				-622 May 07 j 14:27	0°♄		
	-627 Jun 11 j 03:13	0°♂		max. Earth dist.		-622 May 11 j 04:09	2°♄27'30	2.52223 AU	
	-627 Jul 28 j 12:46	0°♍		asc. node		-622 May 17 j 18:43	6°♄58'48		
	-627 Sep 10 j 18:18	0°♊		morning rise		-622 May 29 j 20:37	15°♄09'46		
evening set	-627 Sep 24 j 22:19	10°♊01'11				-622 Jun 21 j 04:17	0°♊		
max. Earth dist.	-627 Oct 10 j 14:47	21°♊20'10	2.44649 AU			-622 Aug 06 j 22:11	0°☿		
desc. node	-627 Oct 12 j 07:18	22°♊34'03				-622 Sep 25 j 03:55	0°♂		
	-627 Oct 22 j 09:58	0°♌				-622 Nov 18 j 06:50	0°♍		
				retrograde		-621 Feb 06 j 21:50	25°♍54'56		
conjunction	-627 Nov 18 j 11:29	20°♌18'49	0°-24'-2	opposition		-621 Mar 15 j 18:27	17°♍53'46	3°23'49	
minimum elong	-627 Nov 18 j 10:00	20°♌15'59	0°24'03	greatest brilliancy		-621 Mar 17 j 00:17	17°♍25'54	-1.7m	
	-627 Dec 01 j 03:18	0°♎		min. Earth dist.		-621 Mar 22 j 21:04	15°♍14'45	0.57289 AU	
	-626 Jan 08 j 16:33	0°♏		direct		-621 Apr 25 j 02:07	8°♍17'58		
morning rise	-626 Jan 19 j 21:15	8°♏47'31		desc. node		-621 Jun 04 j 03:49	17°♍13'23		
	-626 Feb 15 j 21:56	0°♐				-621 Jun 30 j 22:25	0°♊		
	-626 Mar 26 j 16:44	0°♑				-621 Aug 18 j 03:11	0°♌		
	-626 May 05 j 22:21	0°♒				-621 Sep 28 j 18:49	0°♎		
	-626 Jun 17 j 13:16	0°♓				-621 Nov 07 j 03:03	0°♏		
	-626 Aug 02 j 23:14	0°♊				-621 Dec 15 j 23:35	0°♐		
asc. node	-626 Aug 12 j 20:40	5°♊56'35				-620 Jan 24 j 12:58	0°♑		
	-626 Sep 26 j 23:10	0°☿				-620 Mar 05 j 14:25	0°♒		
retrograde	-626 Nov 23 j 11:30	15°☿41'25		evening set		-620 Mar 29 j 03:15	16°♒36'10		
opposition	-625 Jan 02 j 12:03	5°☿57'27	4°14'25	asc. node		-620 Apr 03 j 17:44	20°♒29'36		
greatest brilliancy	-625 Jan 02 j 08:38	6°☿00'53	-1.2m			-620 Apr 17 j 13:38	0°♓		
min. Earth dist.	-625 Jan 02 j 03:41	6°☿05'51	0.67388 AU						
	-625 Jan 18 j 16:52	30°♈		conjunction		-620 May 21 j 20:08	23°♈00'54	0°27'37	
direct	-625 Feb 11 j 23:51	26°♈11'57		minimum elong		-620 May 21 j 18:58	22°♈58'59	0°27'37	
	-625 Mar 10 j 14:20	0°☿				-620 Jun 01 j 10:38	0°♊		
	-625 May 18 j 12:32	0°♂		max. Earth dist.		-620 Jun 09 j 16:32	5°♊23'42	2.62245 AU	
	-625 Jul 08 j 02:30	0°♍		morning rise		-620 Jul 10 j 01:53	25°♊01'24		
	-625 Aug 22 j 06:12	0°♊				-620 Jul 17 j 20:50	0°☿		
desc. node	-625 Aug 30 j 06:41	5°♊36'10				-620 Sep 03 j 10:01	0°♂		
	-625 Oct 03 j 00:54	0°♌				-620 Oct 22 j 00:50	0°♍		
	-625 Nov 11 j 13:53	0°♎				-620 Dec 11 j 18:24	0°♊		
evening set	-625 Nov 20 j 19:47	7°♎10'56				-619 Feb 08 j 05:04	0°♌		
	-625 Dec 19 j 21:05	0°♏		retrograde		-619 Apr 02 j 15:19	13°♌32'56		
				desc. node		-619 Apr 21 j 03:54	11°♌26'13		
conjunction	-624 Jan 25 j 10:02	28°♏49'46	-1°-5'-34	opposition		-619 May 05 j 15:04	7°♌21'03	0°-51'-16	
minimum elong	-624 Jan 25 j 10:01	28°♏49'44	1°05'35	greatest brilliancy		-619 May 06 j 00:47	7°♌13'18	-2.4m	
	-624 Jan 26 j 21:48	0°♐		min. Earth dist.		-619 May 13 j 18:41	4°♌45'40	0.44483 AU	
	-624 Mar 05 j 14:10	0°♑				-619 Jun 05 j 21:08	30°♈		
max. Earth dist.	-624 Mar 10 j 14:51	3°♑49'45	2.39072 AU	direct		-619 Jun 10 j 12:33	29°♊51'00		
morning rise	-624 Apr 03 j 08:03	21°♑37'26				-619 Jun 15 j 04:43	0°♌		
	-624 Apr 14 j 17:31	0°♒				-619 Aug 27 j 03:27	0°♎		
	-624 May 26 j 23:01	0°♓				-619 Oct 10 j 12:00	0°♏		
asc. node	-624 Jun 29 j 19:06	22°♓49'00				-619 Nov 20 j 23:41	0°♐		
	-624 Jul 10 j 19:15	0°♊				-618 Jan 01 j 10:09	0°♑		
	-624 Aug 28 j 02:15	0°☿				-618 Feb 12 j 23:31	0°♒		
	-624 Oct 22 j 11:09	0°♂		asc. node		-618 Feb 19 j 15:22	4°♒36'00		
retrograde	-624 Dec 27 j 20:21	19°♂11'06				-618 Mar 29 j 02:54	0°♓		
opposition	-623 Feb 04 j 22:13	10°♂05'21	4°37'38			-618 May 13 j 19:05	0°♊		
greatest brilliancy	-623 Feb 05 j 14:50	9°♂49'02	-1.3m	evening set		-618 May 14 j 04:08	0°♊14'39		
min. Earth dist.	-623 Feb 08 j 10:47	8°♂42'21	0.65563 AU			-618 Jun 29 j 12:18	0°☿		
direct	-623 Mar 18 j 05:54	0°♂03'39							
	-623 Jun 11 j 21:56	0°♍		conjunction		-618 Jul 01 j 08:27	1°☿10'24	1°01'28	
desc. node	-623 Jul 17 j 05:09	21°♍15'32		minimum elong		-618 Jul 01 j 07:23	1°☿08'43	1°01'29	
	-623 Jul 30 j 14:01	0°♊		max. Earth dist.		-618 Jul 04 j 12:26	3°☿11'33	2.67026 AU	
	-623 Sep 11 j 10:16	0°♌		morning rise		-618 Aug 15 j 18:03	0°♂06'15		
	-623 Oct 21 j 07:29	0°♎				-618 Aug 15 j 14:08	0°♂		
	-623 Nov 28 j 18:02	0°♏				-618 Oct 01 j 11:04	0°♍		
evening set	-622 Jan 05 j 22:04	0°♐				-618 Nov 16 j 22:01	0°♊		
	-622 Jan 29 j 01:22	17°♐57'22				-617 Jan 02 j 04:37	0°♌		
	-622 Feb 13 j 19:29	0°♑				-617 Feb 18 j 01:04	0°♎		
	-622 Mar 26 j 05:01	0°♒		desc. node		-617 Mar 09 j 03:20	11°♎51'58		
						-617 Apr 09 j 01:12	0°♓		
conjunction	-622 Apr 02 j 06:09	5°♒05'37	0°-27'-23	retrograde		-617 Jun 20 j 13:48	25°♓10'48		
minimum elong	-622 Apr 02 j 07:54	5°♒08'46	0°27'22	min. Earth dist.		-617 Jul 19 j 03:27	20°♓30'49	0.37593 AU	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 29

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

opposition	-617 Jul 21 j 04:01	19°☾58'22	-6°-49'-19	conjunction	-612 Oct 28 j 01:39	28°♌51'08	0°00'37
greatest brilliancy	-617 Jul 20 j 15:20	20°☾06'51	-2.9m	minimum elong	-612 Oct 28 j 01:39	28°♌51'08	0°00'37
direct	-617 Aug 19 j 18:54	15°☾02'25		behind sun begin	-612 Oct 27 j 03:08	28°♌09'48	
	-617 Oct 11 j 13:22	0°≈		behind sun end	-612 Oct 29 j 00:10	29°♌32'30	
	-617 Dec 03 j 14:58	0°✠		desc. node	-612 Oct 28 j 23:51	29°♌31'57	
asc. node	-616 Jan 07 j 14:27	21°✠58'38			-612 Oct 29 j 15:06	0°♍	
	-616 Jan 20 j 04:27	0°☿			-612 Dec 08 j 13:03	0°♌	
	-616 Mar 07 j 04:09	0°♊		morning rise	-612 Dec 23 j 20:40	11°♌46'54	
	-616 Apr 23 j 12:57	0°♋			-611 Jan 16 j 07:06	0°☾	
	-616 Jun 10 j 03:17	0°♌			-611 Feb 23 j 16:21	0°≈	
evening set	-616 Jun 21 j 09:42	7°♌07'10			-611 Apr 03 j 14:00	0°✠	
max. Earth dist.	-616 Jul 26 j 17:45	29°♌35'46	2.66351 AU		-611 May 13 j 23:24	0°☿	
	-616 Jul 27 j 08:53	0°♍			-611 Jun 26 j 00:37	0°♊	
					-611 Aug 12 j 23:57	0°♋	
conjunction	-616 Aug 06 j 09:43	6°♍26'34	1°09'23	asc. node	-611 Aug 29 j 12:01	9°♋07'00	
minimum elong	-616 Aug 06 j 10:00	6°♍27'02	1°09'22		-611 Oct 19 j 17:11	0°♌	
	-616 Sep 11 j 14:56	0°♍		retrograde	-611 Nov 10 j 02:52	2°♌42'13	
morning rise	-616 Sep 20 j 04:44	5°♍39'29			-611 Nov 30 j 01:31	30°♋♋	
	-616 Oct 26 j 12:24	0°♌		min. Earth dist.	-611 Dec 18 j 08:36	23°♋34'10	0.66316 AU
	-616 Dec 09 j 00:09	0°♍		opposition	-611 Dec 20 j 05:20	22°♋49'10	3°44'18
	-615 Jan 20 j 06:25	0°♌		greatest brilliancy	-611 Dec 19 j 19:50	22°♋58'44	-1.3m
desc. node	-615 Jan 24 j 02:16	2°♌45'04		direct	-610 Jan 29 j 00:15	13°♋17'35	
	-615 Mar 02 j 17:01	0°☾			-610 Mar 31 j 18:16	0°♌	
	-615 Apr 13 j 03:56	0°≈			-610 May 28 j 04:10	0°♍	
	-615 May 26 j 16:47	0°✠			-610 Jul 16 j 01:48	0°♍	
	-615 Jul 20 j 12:36	0°☿			-610 Aug 29 j 17:56	0°♌	
retrograde	-615 Aug 22 j 21:59	7°☿08'23		desc. node	-610 Sep 15 j 22:48	12°♌09'34	
min. Earth dist.	-615 Sep 20 j 09:03	1°☿33'51	0.47068 AU		-610 Oct 10 j 10:19	0°♍	
	-615 Sep 24 j 19:52	30°♋✠		evening set	-610 Oct 27 j 12:50	12°♍48'31	
greatest brilliancy	-615 Sep 27 j 08:00	29°✠06'19	-2.3m		-610 Nov 19 j 00:12	0°♌	
opposition	-615 Sep 28 j 11:59	28°✠41'25	-2°-56'-34	max. Earth dist.	-610 Dec 07 j 03:17	14°♌05'55	2.37780 AU
direct	-615 Oct 31 j 14:28	21°✠50'02			-610 Dec 27 j 09:05	0°☾	
asc. node	-615 Nov 24 j 14:21	25°✠14'50					
	-615 Dec 09 j 10:59	0°☿		conjunction	-610 Dec 28 j 00:28	0°☾30'17	0°-57'-38
	-614 Feb 09 j 09:09	0°♊		minimum elong	-610 Dec 27 j 21:57	0°☾25'21	0°57'38
	-614 Apr 02 j 08:51	0°♋			-609 Feb 03 j 10:52	0°≈	
	-614 May 22 j 00:05	0°♌		morning rise	-609 Mar 07 j 08:07	24°≈47'38	
	-614 Jul 09 j 01:00	0°♍			-609 Mar 14 j 03:08	0°✠	
evening set	-614 Jul 29 j 01:16	12°♍49'38			-609 Apr 23 j 05:50	0°☿	
max. Earth dist.	-614 Aug 21 j 06:18	27°♍59'45	2.60378 AU		-609 Jun 04 j 12:15	0°♊	
	-614 Aug 24 j 06:58	0°♍		asc. node	-609 Jul 17 j 11:33	28°♊35'18	
					-609 Jul 19 j 16:31	0°♋	
conjunction	-614 Sep 13 j 18:01	13°♍42'05	0°49'30		-609 Sep 07 j 08:28	0°♌	
minimum elong	-614 Sep 13 j 19:21	13°♍44'20	0°49'29		-609 Nov 10 j 07:59	0°♍	
	-614 Oct 07 j 12:56	0°♌		retrograde	-609 Dec 14 j 17:52	6°♍13'42	
morning rise	-614 Oct 31 j 12:16	16°♌50'27			-608 Jan 15 j 02:59	30°♋♌	
	-614 Nov 18 j 20:17	0°♍		opposition	-608 Jan 23 j 07:43	26°♌50'16	4°38'07
desc. node	-614 Dec 12 j 01:18	16°♍59'29		greatest brilliancy	-608 Jan 23 j 16:11	26°♌41'52	-1.2m
	-614 Dec 29 j 12:26	0°♌		min. Earth dist.	-608 Jan 25 j 07:46	26°♌02'36	0.67077 AU
	-613 Feb 07 j 01:54	0°☾		direct	-608 Mar 04 j 11:52	16°♌51'14	
	-613 Mar 18 j 05:43	0°≈			-608 Apr 26 j 07:24	0°♍	
	-613 Apr 26 j 23:35	0°✠			-608 Jun 22 j 11:46	0°♍	
	-613 Jun 07 j 19:25	0°☿		desc. node	-608 Aug 02 j 22:30	26°♍26'10	
	-613 Jul 24 j 23:53	0°♊			-608 Aug 08 j 04:56	0°♌	
retrograde	-613 Oct 05 j 23:00	25°♊35'50			-608 Sep 19 j 11:23	0°♍	
asc. node	-613 Oct 12 j 13:20	25°♊17'08			-608 Oct 29 j 03:30	0°♌	
min. Earth dist.	-613 Nov 08 j 19:54	17°♊56'41	0.59187 AU		-608 Dec 06 j 11:25	0°☾	
opposition	-613 Nov 14 j 09:31	15°♊44'22	1°24'05	evening set	-607 Jan 01 j 12:43	20°☾33'36	
greatest brilliancy	-613 Nov 13 j 22:40	15°♊55'07	-1.6m	greatest brilliancy	-607 Jan 04 j 14:03	22°☾57'54	1.2m
direct	-613 Dec 21 j 11:59	7°♊09'29			-607 Jan 13 j 12:58	0°≈	
	-612 Mar 04 j 19:13	0°♋			-607 Feb 21 j 07:10	0°✠	
	-612 Apr 29 j 16:26	0°♌					
	-612 Jun 18 j 19:49	0°♍		conjunction	-607 Mar 08 j 22:21	11°♋48'41	0°-48'-49
	-612 Aug 04 j 17:11	0°♍		minimum elong	-607 Mar 09 j 01:10	11°♋53'57	0°48'49
evening set	-612 Sep 06 j 20:33	22°♍21'27			-607 Apr 02 j 13:00	0°☿	
	-612 Sep 17 j 20:38	0°♌		max. Earth dist.	-607 Apr 24 j 19:11	15°☿59'41	2.47142 AU
max. Earth dist.	-612 Sep 22 j 02:47	2°♌59'06	2.49689 AU	morning rise	-607 May 10 j 05:45	26°☿50'00	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 30

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-607 May 14 j 19:20	0°♄		min. Earth dist.	-602 Jun 22 j 03:18	18°♂23'48	0.38336 AU
asc. node	-607 Jun 03 j 09:54	13°♂32'41		direct	-602 Jul 20 j 01:05	13°♂51'31	
	-607 Jun 28 j 09:06	0°♂			-602 Sep 11 j 20:42	0°♂	
	-607 Aug 14 j 11:34	0°♂			-602 Nov 01 j 02:57	0°♂	
	-607 Oct 04 j 02:25	0°♂			-602 Dec 16 j 04:41	0°♂	
	-607 Dec 03 j 16:03	0°♂		asc. node	-601 Jan 24 j 06:43	26°♂16'06	
retrograde	-606 Jan 20 j 19:17	11°♂02'58			-601 Jan 29 j 20:55	0°♂	
opposition	-606 Feb 27 j 17:05	2°♂32'13	4°07'06		-601 Mar 16 j 08:55	0°♂	
greatest brilliancy	-606 Feb 28 j 20:11	2°♂06'15	-1.5m		-601 May 01 j 21:33	0°♂	
min. Earth dist.	-606 Mar 05 j 11:56	0°♂19'17	0.61283 AU	evening set	-601 Jun 07 j 14:01	23°♂21'07	
	-606 Mar 06 j 08:22	30°♂♂			-601 Jun 18 j 01:18	0°♂	
direct	-606 Apr 09 j 17:10	22°♂38'39		max. Earth dist.	-601 Jul 18 j 17:20	19°♂29'54	2.67249 AU
	-606 May 16 j 09:42	0°♂					
desc. node	-606 Jun 20 j 21:03	16°♂23'56		conjunction	-601 Jul 24 j 02:44	22°♂56'11	1°09'28
	-606 Jul 14 j 06:02	0°♂		minimum elong	-601 Jul 24 j 02:27	22°♂55'45	1°09'29
	-606 Aug 28 j 04:28	0°♂			-601 Aug 04 j 03:54	0°♂	
	-606 Oct 07 j 20:00	0°♂		morning rise	-601 Sep 06 j 18:51	21°♂40'12	
	-606 Nov 15 j 16:02	0°♂			-601 Sep 19 j 13:54	0°♂	
	-606 Dec 24 j 03:26	0°♂			-601 Nov 03 j 22:40	0°♂	
	-605 Feb 01 j 08:11	0°♂			-601 Dec 18 j 05:35	0°♂	
evening set	-605 Mar 08 j 18:52	26°♂11'38			-600 Jan 30 j 15:22	0°♂	
	-605 Mar 14 j 01:19	0°♂		desc. node	-600 Feb 10 j 18:40	7°♂45'33	
asc. node	-605 Apr 21 j 08:47	27°♂00'04			-600 Mar 13 j 16:18	0°♂	
	-605 Apr 25 j 17:21	0°♂			-600 Apr 26 j 17:41	0°♂	
					-600 Jun 16 j 19:42	0°♂	
conjunction	-605 May 04 j 20:34	6°♂14'26	0°08'08	retrograde	-600 Aug 01 j 04:37	12°♂25'09	
minimum elong	-605 May 04 j 20:08	6°♂13'43	0°08'07	min. Earth dist.	-600 Aug 28 j 00:34	7°♂38'54	0.42157 AU
behind sun begin	-605 May 04 j 00:29	5°♂40'18		greatest brilliancy	-600 Sep 02 j 22:37	5°♂45'33	-2.6m
behind sun end	-605 May 05 j 15:48	6°♂47'05		opposition	-600 Sep 04 j 14:33	5°♂13'29	-5°-4'-54
max. Earth dist.	-605 May 31 j 00:50	23°♂48'47	2.58910 AU		-600 Sep 25 j 13:00	30°♂♂	
	-605 Jun 09 j 09:46	0°♂		direct	-600 Oct 05 j 18:37	29°♂17'43	
morning rise	-605 Jun 25 j 17:27	10°♂39'42			-600 Oct 16 j 07:03	0°♂	
	-605 Jul 25 j 20:30	0°♂		asc. node	-600 Dec 11 j 05:28	19°♂59'51	
	-605 Sep 11 j 20:08	0°♂			-600 Dec 30 j 06:10	0°♂	
	-605 Oct 31 j 18:52	0°♂			-599 Feb 20 j 04:36	0°♂	
	-605 Dec 25 j 16:58	0°♂			-599 Apr 10 j 16:40	0°♂	
retrograde	-604 Mar 09 j 07:26	23°♂06'52			-599 May 29 j 07:36	0°♂	
opposition	-604 Apr 13 j 01:06	16°♂05'35	1°18'05	evening set	-599 Jul 14 j 07:37	28°♂57'24	
greatest brilliancy	-604 Apr 13 j 17:34	15°♂51'16	-2.1m		-599 Jul 15 j 22:51	0°♂	
min. Earth dist.	-604 Apr 21 j 11:23	13°♂10'50	0.49713 AU	max. Earth dist.	-599 Aug 10 j 21:58	16°♂43'45	2.63318 AU
desc. node	-604 May 07 j 19:26	8°♂44'33					
direct	-604 May 21 j 05:48	7°♂29'08		conjunction	-599 Aug 29 j 09:13	28°♂50'06	1°00'39
	-604 Jul 26 j 06:13	0°♂		minimum elong	-599 Aug 29 j 10:17	28°♂51'52	1°00'38
	-604 Sep 10 j 15:55	0°♂			-599 Aug 31 j 03:31	0°♂	
	-604 Oct 21 j 19:56	0°♂		morning rise	-599 Oct 14 j 11:13	29°♂55'02	
	-604 Nov 30 j 19:10	0°♂			-599 Oct 14 j 14:06	0°♂	
	-603 Jan 10 j 05:08	0°♂			-599 Nov 26 j 06:32	0°♂	
	-603 Feb 20 j 23:52	0°♂		desc. node	-599 Dec 28 j 17:05	23°♂33'41	
asc. node	-603 Mar 08 j 08:13	10°♂43'06			-598 Jan 06 j 10:30	0°♂	
	-603 Apr 05 j 13:04	0°♂			-598 Feb 15 j 12:58	0°♂	
evening set	-603 Apr 27 j 09:56	14°♂37'17			-598 Mar 27 j 06:43	0°♂	
	-603 May 20 j 19:30	0°♂			-598 May 06 j 18:45	0°♂	
					-598 Jun 19 j 04:58	0°♂	
conjunction	-603 Jun 16 j 07:26	17°♂09'33	0°51'21		-598 Aug 12 j 15:59	0°♂	
minimum elong	-603 Jun 16 j 06:05	17°♂07'22	0°51'22	retrograde	-598 Sep 20 j 06:25	8°♂54'17	
max. Earth dist.	-603 Jun 25 j 07:02	22°♂55'46	2.65789 AU	min. Earth dist.	-598 Oct 22 j 02:28	1°♂59'41	0.54853 AU
	-603 Jul 06 j 08:07	0°♂			-598 Oct 27 j 06:31	30°♂♂	
morning rise	-603 Aug 01 j 19:14	16°♂51'28		opposition	-598 Oct 28 j 22:56	29°♂20'47	0°00'-42
	-603 Aug 22 j 12:10	0°♂		greatest brilliancy	-598 Jan 01 j 07:55	26°♂13'34	1.8m
	-603 Oct 08 j 20:47	0°♂		asc. node	-598 Oct 29 j 05:05	29°♂14'51	
	-603 Nov 25 j 10:36	0°♂		direct	-598 Dec 03 j 15:16	21°♂19'30	
	-602 Jan 13 j 00:42	0°♂			-597 Jan 13 j 17:53	0°♂	
	-602 Mar 06 j 11:37	0°♂			-597 Mar 17 j 16:08	0°♂	
desc. node	-602 Mar 25 j 19:13	9°♂33'00			-597 May 09 j 02:28	0°♂	
retrograde	-602 May 19 j 07:58	24°♂21'38			-597 Jun 27 j 04:45	0°♂	
opposition	-602 Jun 18 j 19:11	19°♂18'18	-5°-13'-33		-597 Aug 12 j 18:16	0°♂	
greatest brilliancy	-602 Jun 19 j 13:13	19°♂06'00	-2.8m	evening set	-597 Aug 22 j 05:41	6°♂18'26	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 31

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

max. Earth dist.	-597 Sep 08 j 17:03	18° \mathbb{M} 07'30	2.54339 AU			-592 Oct 14 j 09:58	0° Ω	
	-597 Sep 25 j 21:38	0° $\underline{\Omega}$		retrograde		-591 Jan 05 j 06:41	27° Ω 15'32	
				opposition		-591 Feb 12 j 23:41	18° Ω 20'53	4°30'51
conjunction	-597 Oct 10 j 02:16	9° $\underline{\Omega}$ 59'21	0°22'50	greatest brilliancy		-591 Feb 13 j 20:28	18° Ω 00'37	-1.4m
minimum elong	-597 Oct 10 j 03:15	10° $\underline{\Omega}$ 01'06	0°22'48	min. Earth dist.		-591 Feb 17 j 07:45	16° Ω 39'27	0.64312 AU
	-597 Nov 06 j 20:06	0° \mathbb{M}		direct		-591 Mar 26 j 06:31	8° Ω 20'00	
desc. node	-597 Nov 15 j 16:37	6° \mathbb{M} 30'59				-591 Jun 03 j 20:13	0° \mathbb{M}	
morning rise	-597 Dec 01 j 09:41	18° \mathbb{M} 13'13		desc. node		-591 Jul 07 j 13:05	19° \mathbb{M} 09'36	
	-597 Dec 16 j 23:54	0° \mathbb{X}				-591 Jul 24 j 15:26	0° $\underline{\Omega}$	
	-596 Jan 24 j 23:59	0° \mathbb{Z}				-591 Sep 06 j 01:59	0° \mathbb{M}	
	-596 Mar 03 j 14:39	0° \approx				-591 Oct 16 j 04:42	0° \mathbb{X}	
	-596 Apr 11 j 17:20	0° \mathbb{X}				-591 Nov 23 j 17:58	0° \mathbb{Z}	
	-596 May 22 j 10:11	0° \mathbb{Y}				-590 Jan 01 j 00:00	0° \approx	
	-596 Jul 05 j 06:49	0° \mathbb{X}				-590 Feb 08 j 23:11	0° \mathbb{X}	
	-596 Aug 25 j 11:30	0° \mathbb{II}		evening set		-590 Feb 12 j 18:17	2° \mathbb{X} 52'12	
asc. node	-596 Sep 15 j 03:48	9° \mathbb{II} 29'37				-590 Mar 21 j 10:24	0° \mathbb{Y}	
retrograde	-596 Oct 27 j 12:49	19° \mathbb{II} 12'12						
min. Earth dist.	-596 Dec 03 j 04:43	10° \mathbb{II} 35'32	0.64260 AU	conjunction		-590 Apr 14 j 18:05	17° \mathbb{Y} 22'15	0°-14'-11
opposition	-596 Dec 06 j 13:11	9° \mathbb{II} 14'42	3°01'38	minimum elong		-590 Apr 14 j 18:57	17° \mathbb{Y} 23'48	0°14'10
greatest brilliancy	-596 Dec 05 j 23:55	9° \mathbb{II} 28'02	-1.4m	behind sun begin		-590 Apr 14 j 08:00	17° \mathbb{Y} 04'31	
direct	-595 Jan 14 j 10:42	0° \mathbb{II} 01'27		behind sun end		-590 Apr 15 j 05:55	17° \mathbb{Y} 43'04	
	-595 Apr 13 j 11:42	0° \mathbb{S}				-590 May 02 j 21:09	0° \mathbb{X}	
	-595 Jun 05 j 18:30	0° Ω		asc. node		-590 May 08 j 01:34	3° \mathbb{X} 33'55	
	-595 Jul 23 j 15:49	0° \mathbb{M}		max. Earth dist.		-590 May 19 j 00:31	11° \mathbb{X} 01'50	2.54798 AU
	-595 Sep 06 j 01:21	0° $\underline{\Omega}$		morning rise		-590 Jun 09 j 01:46	25° \mathbb{X} 08'11	
desc. node	-595 Oct 02 j 15:57	18° $\underline{\Omega}$ 57'14				-590 Jun 16 j 10:32	0° \mathbb{II}	
evening set	-595 Oct 05 j 23:42	21° $\underline{\Omega}$ 22'13				-590 Aug 02 j 00:10	0° \mathbb{S}	
	-595 Oct 17 j 17:49	0° \mathbb{M}				-590 Sep 19 j 15:47	0° Ω	
max. Earth dist.	-595 Oct 24 j 06:36	4° \mathbb{M} 51'07	2.41902 AU			-590 Nov 10 j 17:56	0° \mathbb{M}	
	-595 Nov 26 j 10:07	0° \mathbb{X}				-589 Jan 16 j 01:46	0° $\underline{\Omega}$	
				retrograde		-589 Feb 17 j 12:22	5° $\underline{\Omega}$ 29'36	
conjunction	-595 Dec 01 j 19:38	4° \mathbb{X} 10'00	0°-37'-47			-589 Mar 19 j 10:49	30° \mathbb{X} \mathbb{M}	
minimum elong	-595 Dec 01 j 17:19	4° \mathbb{X} 05'31	0°37'47	opposition		-589 Mar 25 j 16:39	27° \mathbb{M} 47'15	2°47'02
	-594 Jan 03 j 21:38	0° \mathbb{Z}		greatest brilliancy		-589 Mar 26 j 20:45	27° \mathbb{M} 21'31	-1.8m
morning rise	-594 Feb 05 j 09:09	25° \mathbb{Z} 33'11		min. Earth dist.		-589 Apr 02 j 09:51	24° \mathbb{M} 58'14	0.54770 AU
	-594 Feb 11 j 01:13	0° \approx		direct		-589 May 04 j 10:21	18° \mathbb{M} 27'08	
	-594 Mar 21 j 18:06	0° \mathbb{X}		desc. node		-589 May 25 j 12:05	21° \mathbb{M} 12'16	
	-594 Apr 30 j 21:11	0° \mathbb{Y}				-589 Jun 19 j 05:35	0° $\underline{\Omega}$	
	-594 Jun 12 j 06:53	0° \mathbb{X}				-589 Aug 11 j 00:16	0° \mathbb{M}	
	-594 Jul 28 j 01:27	0° \mathbb{II}				-589 Sep 22 j 17:25	0° \mathbb{X}	
asc. node	-594 Aug 03 j 01:52	3° \mathbb{II} 43'32				-589 Nov 01 j 12:39	0° \mathbb{Z}	
	-594 Sep 18 j 05:32	0° \mathbb{S}				-589 Dec 10 j 16:08	0° \approx	
retrograde	-594 Dec 01 j 04:37	23° \mathbb{S} 30'26				-588 Jan 19 j 10:47	0° \mathbb{X}	
opposition	-593 Jan 10 j 02:21	13° \mathbb{S} 52'45	4°26'31			-588 Feb 29 j 16:37	0° \mathbb{Y}	
greatest brilliancy	-593 Jan 10 j 02:54	13° \mathbb{S} 52'12	-1.2m	asc. node		-588 Mar 24 j 23:35	17° \mathbb{Y} 03'58	
min. Earth dist.	-593 Jan 10 j 13:51	13° \mathbb{S} 41'16	0.67567 AU	evening set		-588 Apr 09 j 06:21	27° \mathbb{Y} 34'53	
direct	-593 Feb 19 j 21:14	4° \mathbb{S} 01'20				-588 Apr 12 j 19:30	0° \mathbb{X}	
	-593 May 11 j 07:36	0° Ω				-588 May 27 j 18:43	0° \mathbb{II}	
	-593 Jul 02 j 13:50	0° \mathbb{M}						
	-593 Aug 17 j 05:20	0° $\underline{\Omega}$		conjunction		-588 May 31 j 10:20	2° \mathbb{II} 23'20	0°37'24
desc. node	-593 Aug 20 j 14:35	2° $\underline{\Omega}$ 20'25		minimum elong		-588 May 31 j 08:59	2° \mathbb{II} 21'08	0°37'24
	-593 Sep 28 j 04:21	0° \mathbb{M}		max. Earth dist.		-588 Jun 15 j 13:15	12° \mathbb{II} 13'33	2.63741 AU
	-593 Nov 06 j 18:39	0° \mathbb{X}				-588 Jul 13 j 04:51	0° \mathbb{S}	
evening set	-593 Dec 05 j 16:18	22° \mathbb{X} 34'56		morning rise		-588 Jul 18 j 12:29	3° \mathbb{S} 23'36	
	-593 Dec 15 j 02:06	0° \mathbb{Z}				-588 Aug 29 j 13:35	0° Ω	
	-592 Jan 22 j 02:52	0° \approx				-588 Oct 16 j 14:56	0° \mathbb{M}	
						-588 Dec 04 j 21:30	0° $\underline{\Omega}$	
conjunction	-592 Feb 10 j 12:53	15° \approx 09'57	-1°-3'-13			-587 Jan 26 j 22:08	0° \mathbb{M}	
minimum elong	-592 Feb 10 j 14:34	15° \approx 13'14	1°03'13	desc. node		-587 Apr 11 j 10:58	26° \mathbb{M} 59'09	
	-592 Feb 29 j 19:10	0° \mathbb{X}		retrograde		-587 Apr 18 j 10:14	27° \mathbb{M} 16'40	
max. Earth dist.	-592 Mar 31 j 23:29	23° \mathbb{X} 25'43	2.41769 AU	opposition		-587 May 20 j 06:50	21° \mathbb{M} 33'29	-2°-23'-39
	-592 Apr 09 j 22:15	0° \mathbb{Y}		greatest brilliancy		-587 May 21 j 04:08	21° \mathbb{M} 17'27	-2.6m
morning rise	-592 Apr 17 j 14:49	5° \mathbb{Y} 35'24		min. Earth dist.		-587 May 27 j 10:28	19° \mathbb{M} 24'29	0.41850 AU
	-592 May 22 j 02:35	0° \mathbb{X}		direct		-587 Jun 23 j 15:22	14° \mathbb{M} 48'18	
asc. node	-592 Jun 20 j 01:58	19° \mathbb{X} 40'09				-587 Aug 13 j 23:34	0° \mathbb{X}	
	-592 Jul 05 j 18:19	0° \mathbb{II}				-587 Oct 02 j 04:40	0° \mathbb{Z}	
	-592 Aug 22 j 11:01	0° \mathbb{S}				-587 Nov 14 j 06:06	0° \approx	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 32

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-587 Dec 26 j 13:09	0° H				-582 Dec 24 j 14:29	0° J		
	-586 Feb 07 j 15:36	0° Y				-581 Feb 01 j 22:53	0° Z		
asc. node	-586 Feb 09 j 22:28	1° Y 33'54				-581 Mar 12 j 21:17	0° \approx		
	-586 Mar 24 j 03:54	0° B				-581 Apr 21 j 08:00	0° H		
	-586 May 09 j 01:43	0° II				-581 Jun 01 j 13:58	0° Y		
evening set	-586 May 23 j 06:01	9° II 07'30				-581 Jul 16 j 23:47	0° B		
	-586 Jun 24 j 21:50	0° S				-581 Sep 16 j 02:34	0° II		
					asc. node	-581 Oct 02 j 19:24	3° II 56'15		
conjunction	-586 Jul 09 j 17:09	9° S 25'45	1°05'33		retrograde	-581 Oct 14 j 10:02	4° II 49'20		
minimum elong	-586 Jul 09 j 16:20	9° S 24'28	1°05'34			-581 Nov 09 j 19:24	30° R B		
max. Earth dist.	-586 Jul 09 j 19:43	9° S 29'50	2.67341 AU		min. Earth dist.	-581 Nov 18 j 07:40	26° B 48'35	0.61227 AU	
	-586 Aug 10 j 23:31	0° Q			opposition	-581 Nov 23 j 03:13	24° B 53'18	2°04'46	
morning rise	-586 Aug 23 j 17:25	8° Q 09'18			greatest brilliancy	-581 Nov 22 j 13:46	25° B 06'43	-1.5m	
	-586 Sep 26 j 15:52	0° M			direct	-581 Dec 30 j 22:24	16° B 03'14		
	-586 Nov 11 j 16:03	0° A				-580 Feb 24 j 00:36	0° II		
	-586 Dec 27 j 01:56	0° M				-580 Apr 23 j 16:06	0° S		
	-585 Feb 10 j 07:19	0° J				-580 Jun 13 j 17:47	0° Q		
desc. node	-585 Feb 27 j 11:07	11° J 17'22				-580 Jul 30 j 23:08	0° M		
	-585 Mar 28 j 11:54	0° Z				-580 Sep 13 j 04:59	0° A		
	-585 May 19 j 22:28	0° \approx			evening set	-580 Sep 16 j 21:58	2° A 35'57		
retrograde	-585 Jul 07 j 06:27	13° \approx 21'31			max. Earth dist.	-580 Oct 01 j 22:07	13° A 14'53	2.46927 AU	
min. Earth dist.	-585 Aug 03 j 09:28	8° \approx 54'16	0.38551 AU		desc. node	-580 Oct 19 j 07:56	25° A 51'56		
greatest brilliancy	-585 Aug 06 j 20:25	7° \approx 55'39	-2.8m			-580 Oct 24 j 22:58	0° M		
opposition	-585 Aug 08 j 02:06	7° \approx 34'34	-6°-40'-55						
direct	-585 Sep 06 j 21:54	2° \approx 27'01			conjunction	-580 Nov 08 j 19:57	11° M 03'40	0°-13'-21	
	-585 Nov 23 j 15:09	0° H			minimum elong	-580 Nov 08 j 19:10	11° M 02'11	0°13'21	
asc. node	-585 Dec 28 j 21:38	20° H 34'35			behind sun begin	-580 Nov 08 j 05:22	10° M 36'19		
	-584 Jan 13 j 08:00	0° Y			behind sun end	-580 Nov 09 j 08:59	11° M 28'04		
	-584 Mar 01 j 13:25	0° B				-580 Dec 03 j 19:06	0° J		
	-584 Apr 18 j 12:43	0° II			morning rise	-579 Jan 07 j 15:29	27° J 01'33		
	-584 Jun 05 j 10:26	0° S				-579 Jan 11 j 10:43	0° Z		
evening set	-584 Jun 29 j 17:57	15° S 19'57				-579 Feb 18 j 17:41	0° \approx		
	-584 Jul 22 j 19:10	0° Q			greatest brilliancy	-579 Mar 03 j 15:48	10° \approx 04'07	1.2m	
max. Earth dist.	-584 Aug 01 j 04:24	6° Q 01'19	2.65509 AU			-579 Mar 29 j 13:03	0° H		
						-579 May 08 j 18:49	0° Y		
conjunction	-584 Aug 14 j 15:19	14° Q 42'37	1°07'24			-579 Jun 20 j 11:49	0° B		
minimum elong	-584 Aug 14 j 15:56	14° Q 43'35	1°07'24			-579 Aug 06 j 08:03	0° II		
	-584 Sep 07 j 00:41	0° M			asc. node	-579 Aug 19 j 19:10	7° II 52'18		
morning rise	-584 Sep 28 j 17:14	14° M 24'49				-579 Oct 03 j 03:09	0° S		
	-584 Oct 21 j 18:20	0° A			retrograde	-579 Nov 17 j 19:33	10° S 39'56		
	-584 Dec 03 j 22:46	0° M			opposition	-579 Dec 27 j 21:28	0° S 51'20	4°03'19	
desc. node	-583 Jan 14 j 10:47	29° M 45'55			min. Earth dist.	-579 Dec 26 j 20:19	1° S 16'36	0.67031 AU	
	-583 Jan 14 j 18:31	0° J			greatest brilliancy	-579 Dec 27 j 15:00	0° S 57'49	-1.3m	
	-583 Feb 24 j 15:11	0° Z				-579 Dec 30 j 00:42	30° R II		
	-583 Apr 06 j 06:42	0° \approx			direct	-578 Feb 06 j 02:22	21° II 11'46		
	-583 May 18 j 04:59	0° H				-578 Mar 20 j 11:52	0° S		
	-583 Jul 04 j 16:03	0° Y				-578 May 22 j 00:10	0° Q		
retrograde	-583 Sep 02 j 21:23	19° Y 50'54				-578 Jul 10 j 21:14	0° M		
min. Earth dist.	-583 Oct 02 j 13:12	13° Y 46'37	0.49918 AU			-578 Aug 24 j 21:19	0° A		
opposition	-583 Oct 10 j 09:18	10° Y 53'11	-1°-46'-32		desc. node	-578 Sep 06 j 07:12	8° A 42'26		
greatest brilliancy	-583 Oct 09 j 15:47	11° Y 09'24	-2.1m			-578 Oct 05 j 16:17	0° M		
direct	-583 Nov 13 j 10:54	3° Y 34'01			evening set	-578 Nov 09 j 20:55	26° M 36'25		
asc. node	-583 Nov 14 j 19:57	3° Y 34'46				-578 Nov 14 j 06:27	0° J		
	-582 Feb 01 j 03:31	0° B				-578 Dec 22 j 14:33	0° Z		
	-582 Mar 27 j 12:03	0° II							
	-582 May 16 j 22:53	0° S			conjunction	-577 Jan 12 j 20:03	16° Z 45'38	-1°-3'-57	
	-582 Jul 04 j 08:03	0° Q			minimum elong	-577 Jan 12 j 18:41	16° Z 42'57	1°03'58	
evening set	-582 Aug 06 j 15:57	21° Q 25'43				-577 Jan 29 j 15:27	0° \approx		
	-582 Aug 19 j 16:41	0° M			max. Earth dist.	-577 Feb 06 j 18:25	6° \approx 22'03	2.37494 AU	
max. Earth dist.	-582 Aug 27 j 16:00	5° M 18'01	2.58433 AU			-577 Mar 09 j 07:00	0° H		
					morning rise	-577 Mar 23 j 12:04	10° H 47'31		
conjunction	-582 Sep 22 j 22:28	23° M 05'55	0°41'00			-577 Apr 18 j 08:44	0° Y		
minimum elong	-582 Sep 22 j 23:49	23° M 08'13	0°40'59			-577 May 30 j 13:04	0° B		
	-582 Oct 02 j 22:05	0° A			asc. node	-577 Jul 07 j 17:43	25° B 39'26		
morning rise	-582 Nov 10 j 23:50	27° A 44'25				-577 Jul 14 j 10:22	0° II		
	-582 Nov 14 j 02:34	0° M				-577 Sep 01 j 03:01	0° S		
desc. node	-582 Dec 02 j 09:14	13° M 24'27				-577 Oct 28 j 17:50	0° Q		

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 33

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

retrograde	-577 Dec 22 j 18:37	14°♂05'33			-571 Feb 15 j 20:21	0°♂	
opposition	-576 Jan 31 j 02:02	4°♂51'24	4°39'10	asc. node	-571 Feb 26 j 13:45	7°♂27'10	
greatest brilliancy	-576 Jan 31 j 14:58	4°♂38'37	-1.3m		-571 Mar 31 j 16:04	0°♂	
min. Earth dist.	-576 Feb 02 j 21:53	3°♂44'25	0.66365 AU	evening set	-571 May 07 j 03:24	24°♂08'57	
	-576 Feb 12 j 21:43	30°♂			-571 May 16 j 02:45	0°♂	
direct	-576 Mar 12 j 08:32	24°♂50'25					
	-576 Apr 12 j 09:25	0°♂		conjunction	-571 Jun 25 j 00:17	25°♂42'38	0°57'42
	-576 Jun 15 j 21:44	0°♂		minimum elong	-571 Jun 24 j 23:04	25°♂40'42	0°57'42
desc. node	-576 Jul 24 j 05:41	23°♂41'48		max. Earth dist.	-571 Jun 30 j 16:46	29°♂20'48	2.66586 AU
	-576 Aug 02 j 17:34	0°♂			-571 Jul 01 j 17:18	0°♂	
	-576 Sep 14 j 08:58	0°♂		morning rise	-571 Aug 09 j 19:49	24°♂54'43	
	-576 Oct 24 j 04:48	0°♂			-571 Aug 17 j 19:47	0°♂	
	-576 Dec 01 j 14:22	0°♂			-571 Oct 03 j 21:32	0°♂	
	-575 Jan 08 j 17:01	0°♂			-571 Nov 19 j 19:30	0°♂	
evening set	-575 Jan 17 j 04:51	6°♂38'13			-570 Jan 05 j 23:04	0°♂	
	-575 Feb 16 j 12:09	0°♂			-570 Feb 23 j 14:53	0°♂	
				desc. node	-570 Mar 16 j 03:43	11°♂54'07	
conjunction	-575 Mar 23 j 01:19	25°♂49'10	0°-37'-1		-570 Apr 20 j 17:00	0°♂	
minimum elong	-575 Mar 23 j 03:40	25°♂53'29	0°37'00	retrograde	-570 Jun 06 j 15:34	11°♂47'38	
	-575 Mar 28 j 18:39	0°♂		opposition	-570 Jul 06 j 20:16	6°♂47'58	-6°-23'-35
max. Earth dist.	-575 May 04 j 19:49	26°♂22'25	2.50000 AU	greatest brilliancy	-570 Jul 06 j 23:13	6°♂46'01	-2.9m
	-575 May 10 j 01:17	0°♂		min. Earth dist.	-570 Jul 07 j 07:02	6°♂40'52	0.37526 AU
morning rise	-575 May 21 j 16:31	7°♂59'36		direct	-570 Aug 05 j 20:00	1°♂46'48	
asc. node	-575 May 24 j 16:57	10°♂02'57			-570 Oct 21 j 13:25	0°♂	
	-575 Jun 23 j 13:21	0°♂			-570 Dec 08 j 19:36	0°♂	
	-575 Aug 09 j 09:09	0°♂		asc. node	-569 Jan 14 j 12:31	23°♂54'38	
	-575 Sep 28 j 01:34	0°♂			-569 Jan 23 j 20:09	0°♂	
	-575 Nov 23 j 01:54	0°♂			-569 Mar 11 j 01:34	0°♂	
retrograde	-574 Jan 30 j 08:13	19°♂50'55			-569 Apr 27 j 00:07	0°♂	
opposition	-574 Mar 08 j 16:43	11°♂35'37	3°44'31		-569 Jun 13 j 09:23	0°♂	
greatest brilliancy	-574 Mar 09 j 21:44	11°♂08'09	-1.6m	evening set	-569 Jun 16 j 03:25	1°♂44'31	
min. Earth dist.	-574 Mar 15 j 05:28	9°♂07'34	0.59176 AU	max. Earth dist.	-569 Jul 23 j 23:58	25°♂47'40	2.66861 AU
direct	-574 Apr 18 j 08:37	1°♂50'30			-569 Jul 30 j 13:50	0°♂	
desc. node	-574 Jun 11 j 03:57	16°♂35'20					
	-574 Jul 06 j 11:09	0°♂		conjunction	-569 Aug 01 j 07:41	1°♂07'01	1°09'54
	-574 Aug 22 j 01:01	0°♂		minimum elong	-569 Aug 01 j 07:44	1°♂07'05	1°09'54
	-574 Oct 02 j 05:57	0°♂		morning rise	-569 Sep 14 j 23:38	0°♂02'42	
	-574 Nov 10 j 08:30	0°♂			-569 Sep 14 j 21:59	0°♂	
	-574 Dec 19 j 00:27	0°♂			-569 Oct 30 j 00:56	0°♂	
	-573 Jan 27 j 09:03	0°♂			-569 Dec 12 j 21:09	0°♂	
	-573 Mar 09 j 05:25	0°♂			-568 Jan 24 j 15:03	0°♂	
evening set	-573 Mar 21 j 04:35	8°♂32'01		desc. node	-568 Feb 01 j 02:19	5°♂18'22	
asc. node	-573 Apr 11 j 16:13	23°♂34'39			-568 Mar 06 j 16:17	0°♂	
	-573 Apr 21 j 00:07	0°♂			-568 Apr 18 j 00:26	0°♂	
					-568 Jun 02 j 11:18	0°♂	
conjunction	-573 May 15 j 07:25	16°♂27'09	0°19'45	retrograde	-568 Aug 13 j 23:13	27°♂20'05	
minimum elong	-573 May 15 j 06:29	16°♂25'37	0°19'45	min. Earth dist.	-568 Sep 10 j 13:23	22°♂08'26	0.44788 AU
	-573 Jun 04 j 17:41	0°♂		greatest brilliancy	-568 Sep 17 j 04:37	19°♂53'24	-2.4m
max. Earth dist.	-573 Jun 06 j 08:14	1°♂03'18	2.60849 AU	opposition	-568 Sep 18 j 15:11	19°♂23'50	-3°-52'-8
morning rise	-573 Jul 04 j 14:57	19°♂25'57		direct	-568 Oct 20 j 21:36	12°♂56'41	
	-573 Jul 21 j 03:05	0°♂		asc. node	-568 Dec 01 j 12:38	22°♂15'43	
	-573 Sep 06 j 19:41	0°♂			-568 Dec 19 j 09:15	0°♂	
	-573 Oct 25 j 22:02	0°♂			-567 Feb 13 j 12:05	0°♂	
	-573 Dec 17 j 01:09	0°♂			-567 Apr 05 j 06:17	0°♂	
	-572 Feb 22 j 00:16	0°♂			-567 May 24 j 10:20	0°♂	
retrograde	-572 Mar 22 j 12:29	4°♂42'08			-567 Jul 11 j 07:25	0°♂	
	-572 Apr 19 j 12:37	30°♂		evening set	-567 Jul 22 j 17:29	7°♂18'05	
opposition	-572 Apr 25 j 08:11	28°♂07'21	0°09'33	max. Earth dist.	-567 Aug 16 j 19:10	23°♂33'56	2.61797 AU
greatest brilliancy	-573 Dec 29 j 21:26	6°♂49'47	-3.4m		-567 Aug 26 j 13:35	0°♂	
desc. node	-572 Apr 28 j 04:09	27°♂10'39					
min. Earth dist.	-572 May 03 j 19:54	25°♂18'49	0.46789 AU	conjunction	-567 Sep 07 j 01:44	7°♂39'12	0°54'43
direct	-572 Jun 01 j 09:14	20°♂04'46		minimum elong	-567 Sep 07 j 02:59	7°♂41'18	0°54'43
	-572 Jul 12 j 03:48	0°♂			-567 Oct 09 j 22:38	0°♂	
	-572 Sep 02 j 12:14	0°♂		morning rise	-567 Oct 23 j 23:23	9°♂45'56	
	-572 Oct 15 j 03:07	0°♂			-567 Nov 21 j 10:43	0°♂	
	-572 Nov 24 j 19:32	0°♂		desc. node	-567 Dec 19 j 01:23	20°♂08'12	
	-571 Jan 04 j 17:08	0°♂			-566 Jan 01 j 08:38	0°♂	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 34

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-566 Feb 10 j 03:45	0°☾			-561 May 02 j 23:44	0°♈		
	-566 Mar 21 j 13:01	0°♊			-561 Jun 26 j 18:57	0°♉		
	-566 Apr 30 j 13:02	0°♈		desc. node	-561 Aug 10 j 22:31	29°♉13'02		
	-566 Jun 11 j 20:10	0°♊			-561 Aug 12 j 02:01	0°♊		
	-566 Jul 30 j 20:17	0°♈			-561 Sep 23 j 06:13	0°♉		
retrograde	-566 Sep 29 j 09:41	19°♈06'29			-561 Nov 01 j 22:16	0°♊		
asc. node	-566 Oct 19 j 11:34	16°♈12'23			-561 Dec 10 j 06:05	0°☾		
min. Earth dist.	-566 Nov 01 j 09:20	11°♈46'39	0.57341 AU	evening set	-561 Dec 21 j 07:06	8°☾43'16		
opposition	-566 Nov 07 j 13:38	9°♈21'06	0°50'51		-560 Jan 17 j 06:55	0°♊		
greatest brilliancy	-566 Nov 07 j 06:04	9°♈28'32	-1.7m		-560 Feb 24 j 23:33	0°♈		
direct	-566 Dec 14 j 01:21	1°♈00'22						
	-565 Mar 10 j 08:34	0°♊		conjunction	-560 Feb 26 j 08:29	1°♈02'47	0°-56'-17	
	-565 May 03 j 14:11	0°☾		minimum elong	-560 Feb 26 j 11:10	1°♈07'54	0°56'16	
	-565 Jun 22 j 07:01	0°♈			-560 Apr 05 j 02:58	0°♊		
	-565 Aug 08 j 01:56	0°♉		max. Earth dist.	-560 Apr 15 j 22:55	7°♊51'28	2.44747 AU	
evening set	-565 Aug 31 j 13:47	15°♉44'14		morning rise	-560 Apr 30 j 20:51	18°♊30'16		
max. Earth dist.	-565 Sep 16 j 15:59	26°♉47'22	2.51842 AU		-560 May 17 j 07:00	0°♈		
	-565 Sep 21 j 06:41	0°♊		asc. node	-560 Jun 10 j 08:24	16°♈24'54		
					-560 Jun 30 j 19:53	0°♊		
conjunction	-565 Oct 20 j 14:43	20°♊51'05	0°10'31		-560 Aug 17 j 02:10	0°☾		
minimum elong	-565 Oct 20 j 15:14	20°♊52'02	0°10'30		-560 Oct 07 j 10:39	0°♈		
behind sun begin	-565 Oct 19 j 22:12	20°♊21'13			-560 Dec 12 j 12:19	0°♉		
behind sun end	-565 Oct 21 j 08:17	21°♊22'51		retrograde	-559 Jan 13 j 23:58	5°♉30'32		
	-565 Nov 02 j 03:59	0°♉			-559 Feb 12 j 16:28	30°♉♈		
desc. node	-565 Nov 06 j 00:15	2°♉49'38		opposition	-559 Feb 21 j 07:03	26°♉48'19	4°18'47	
	-565 Dec 12 j 05:23	0°♊		greatest brilliancy	-559 Feb 22 j 07:27	26°♉24'43	-1.4m	
morning rise	-565 Dec 14 j 05:29	1°♊31'45		min. Earth dist.	-559 Feb 26 j 10:04	24°♉49'28	0.62768 AU	
	-564 Jan 20 j 02:22	0°☾		direct	-559 Apr 03 j 11:00	16°♉50'34		
	-564 Feb 27 j 13:46	0°♊			-559 May 24 j 19:27	0°♉		
	-564 Apr 06 j 12:51	0°♈		desc. node	-559 Jun 27 j 21:31	17°♉38'05		
	-564 May 16 j 23:41	0°♊			-559 Jul 18 j 06:48	0°♊		
	-564 Jun 29 j 05:59	0°♈			-559 Aug 31 j 13:12	0°♉		
	-564 Aug 17 j 02:55	0°♊			-559 Oct 10 j 23:33	0°♊		
asc. node	-564 Sep 05 j 10:01	10°♊04'57			-559 Nov 18 j 16:28	0°☾		
retrograde	-564 Nov 04 j 09:14	27°♊28'59			-559 Dec 27 j 00:49	0°♊		
min. Earth dist.	-564 Dec 11 j 22:15	18°♊34'51	0.65516 AU		-558 Feb 04 j 02:05	0°♈		
opposition	-564 Dec 14 j 11:32	17°♊33'14	3°28'12	evening set	-558 Feb 26 j 17:19	16°♈54'46		
greatest brilliancy	-564 Dec 13 j 23:53	17°♊44'57	-1.3m		-558 Mar 16 j 15:09	0°♊		
direct	-563 Jan 22 j 21:43	8°♊09'25						
	-563 Apr 05 j 17:16	0°☾		conjunction	-558 Apr 26 j 12:01	28°♊52'09	0°-1'-5	
	-563 May 31 j 04:19	0°♈		minimum elong	-558 Apr 26 j 12:04	28°♊52'14	0°01'05	
	-563 Jul 18 j 16:15	0°♉		behind sun begin	-558 Apr 25 j 12:56	28°♊12'20		
	-563 Sep 01 j 06:55	0°♊		behind sun end	-558 Apr 27 j 11:12	29°♊32'05		
desc. node	-563 Sep 22 j 22:53	15°♊21'08		asc. node	-558 Apr 28 j 06:48	0°♈		
	-563 Oct 13 j 00:28	0°♉			-558 Apr 28 j 03:24	0°♈		
evening set	-563 Oct 17 j 21:23	3°♉36'48		max. Earth dist.	-558 May 26 j 07:11	19°♈06'28	2.57170 AU	
max. Earth dist.	-563 Nov 12 j 09:58	22°♉53'02	2.39357 AU		-558 Jun 11 j 17:04	0°♊		
	-563 Nov 21 j 16:20	0°♊		morning rise	-558 Jun 18 j 18:55	4°♊38'47		
					-558 Jul 28 j 03:52	0°☾		
conjunction	-563 Dec 16 j 06:13	19°♊07'06	0°-50'-7		-558 Sep 14 j 08:42	0°♈		
minimum elong	-563 Dec 16 j 03:30	19°♊01'47	0°50'07		-558 Nov 04 j 01:08	0°♉		
	-563 Dec 30 j 02:44	0°☾			-558 Dec 31 j 23:03	0°♊		
	-562 Feb 06 j 05:09	0°♊		retrograde	-557 Feb 28 j 21:27	15°♊40'06		
morning rise	-562 Feb 22 j 07:53	12°♊35'41		opposition	-557 Apr 05 j 08:06	8°♊19'16	2°00'10	
	-562 Mar 16 j 21:05	0°♈		greatest brilliancy	-557 Apr 06 j 07:08	7°♊58'43	-2.0m	
	-562 Apr 25 j 22:40	0°♊		min. Earth dist.	-557 Apr 13 j 13:09	5°♊24'27	0.52040 AU	
	-562 Jun 07 j 04:40	0°♈			-557 May 04 j 14:13	30°♉♉		
	-562 Jul 22 j 12:05	0°♊		direct	-557 May 14 j 07:38	29°♉20'48		
asc. node	-562 Jul 24 j 09:42	1°♊12'13		desc. node	-557 May 15 j 19:49	29°♉21'43		
	-562 Sep 10 j 21:49	0°☾			-557 May 24 j 06:49	0°♊		
	-562 Nov 24 j 07:12	0°♈			-557 Aug 02 j 17:16	0°♉		
retrograde	-562 Dec 08 j 22:25	1°♈15'31			-557 Sep 16 j 03:50	0°♊		
	-562 Dec 22 j 18:36	30°♉☾			-557 Oct 26 j 15:27	0°☾		
opposition	-561 Jan 17 j 16:16	21°☾45'11	4°34'34		-557 Dec 05 j 04:22	0°♊		
greatest brilliancy	-561 Jan 17 j 21:04	21°☾40'24	-1.2m		-556 Jan 14 j 06:05	0°♈		
min. Earth dist.	-561 Jan 18 j 23:30	21°☾14'04	0.67425 AU		-556 Feb 24 j 17:23	0°♊		
direct	-561 Feb 27 j 17:02	11°☾49'08		asc. node	-556 Mar 15 j 06:08	13°♊41'44		

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-556 Apr 08 j 00:28	0°♄			-551 Feb 18 j 20:24	0°♅		
evening set	-556 Apr 19 j 19:47	7°♄57'51			-551 Mar 30 j 22:27	0°♆		
	-556 May 23 j 02:23	0°♅			-551 May 10 j 21:59	0°♆		
					-551 Jun 24 j 11:12	0°♄		
conjunction	-556 Jun 09 j 15:53	11°♅25'36	0°45'58		-551 Aug 29 j 12:58	0°♄		
minimum elong	-556 Jun 09 j 14:29	11°♅23'21	0°45'58	retrograde	-551 Sep 13 j 00:19	1°♄26'23		
max. Earth dist.	-556 Jun 21 j 06:13	18°♅54'50	2.64975 AU		-551 Sep 26 j 22:53	30°♄		
	-556 Jul 08 j 13:06	0°♅		min. Earth dist.	-551 Oct 13 j 21:32	24°♄53'44	0.52690 AU	
morning rise	-556 Jul 26 j 18:52	11°♅37'40		opposition	-551 Oct 21 j 05:56	22°♄06'10	0°-43'-5	
	-556 Aug 24 j 18:33	0°♄		greatest brilliancy	-551 Oct 20 j 22:52	22°♄12'52	-2.0m	
	-556 Oct 11 j 09:46	0°♄		asc. node	-551 Nov 05 j 03:18	17°♄06'35		
	-556 Nov 28 j 15:10	0°♄		direct	-551 Nov 25 j 04:59	14°♄22'43		
	-555 Jan 17 j 17:17	0°♄			-550 Jan 22 j 00:40	0°♄		
	-555 Mar 16 j 14:37	0°♄			-550 Mar 21 j 06:12	0°♅		
desc. node	-555 Apr 01 j 19:25	6°♄13'22			-550 May 11 j 18:30	0°♅		
retrograde	-555 May 05 j 08:59	12°♄23'15			-550 Jun 29 j 13:40	0°♄		
opposition	-555 Jun 05 j 08:15	7°♄05'32	-4°-2'-5	evening set	-550 Aug 15 j 10:58	0°♄14'52		
greatest brilliancy	-555 Jun 06 j 08:15	6°♄48'26	-2.7m		-550 Aug 15 j 01:58	0°♄		
min. Earth dist.	-555 Jun 10 j 16:21	5°♄34'36	0.39633 AU	max. Earth dist.	-550 Sep 03 j 09:16	12°♄54'21	2.56250 AU	
direct	-555 Jul 07 j 22:28	1°♄06'20			-550 Sep 28 j 07:22	0°♄		
	-555 Sep 21 j 18:04	0°♅						
	-555 Nov 06 j 16:20	0°♆		conjunction	-550 Oct 02 j 12:35	2°♄56'32	0°31'03	
	-555 Dec 20 j 05:56	0°♆		minimum elong	-550 Oct 02 j 13:47	2°♄58'38	0°31'02	
asc. node	-554 Jan 31 j 05:05	28°♆43'26			-550 Nov 09 j 09:19	0°♄		
	-554 Feb 02 j 02:19	0°♄		morning rise	-550 Nov 22 j 05:49	9°♄26'17		
	-554 Mar 19 j 01:52	0°♄		desc. node	-550 Nov 22 j 16:59	9°♄46'54		
	-554 May 04 j 06:38	0°♅			-550 Dec 19 j 17:18	0°♄		
evening set	-554 Jun 01 j 02:46	17°♅48'24			-549 Jan 27 j 21:15	0°♅		
	-554 Jun 20 j 06:28	0°♅			-549 Mar 07 j 14:57	0°♆		
max. Earth dist.	-554 Jul 15 j 02:47	15°♅48'31	2.67395 AU		-549 Apr 15 j 20:16	0°♆		
					-549 May 26 j 16:45	0°♄		
conjunction	-554 Jul 18 j 00:11	17°♅39'02	1°08'18		-549 Jul 10 j 00:01	0°♄		
minimum elong	-554 Jul 17 j 23:40	17°♅38'13	1°08'19		-549 Sep 01 j 12:34	0°♅		
	-554 Aug 06 j 08:31	0°♄		asc. node	-549 Sep 23 j 02:22	8°♅30'07		
morning rise	-554 Aug 31 j 18:26	16°♄19'03		retrograde	-549 Oct 22 j 13:43	13°♅37'03		
	-554 Sep 21 j 21:34	0°♄		min. Earth dist.	-549 Nov 27 j 11:23	5°♅16'10	0.63023 AU	
	-554 Nov 06 j 13:21	0°♄		opposition	-549 Dec 01 j 12:08	3°♅39'15	2°39'45	
	-554 Dec 21 j 07:36	0°♄		greatest brilliancy	-549 Nov 30 j 22:04	3°♅53'20	-1.5m	
	-553 Feb 03 j 10:39	0°♄			-549 Dec 11 j 01:19	30°♄		
desc. node	-553 Feb 17 j 19:08	9°♄47'47		direct	-548 Jan 08 j 22:47	24°♄35'48		
	-553 Mar 19 j 13:42	0°♅			-548 Feb 10 j 00:53	0°♅		
	-553 May 04 j 20:03	0°♆			-548 Apr 17 j 05:22	0°♅		
	-553 Jul 12 j 23:05	0°♆			-548 Jun 08 j 12:27	0°♄		
retrograde	-553 Jul 22 j 11:28	0°♆38'07			-548 Jul 26 j 03:52	0°♄		
	-553 Aug 01 j 00:02	30°♄			-548 Sep 08 j 13:13	0°♄		
min. Earth dist.	-553 Aug 18 j 01:49	26°♄06'17	0.40291 AU	evening set	-548 Sep 27 j 11:04	13°♄22'45		
greatest brilliancy	-553 Aug 23 j 02:34	24°♄35'10	-2.7m	desc. node	-548 Oct 09 j 16:35	22°♄12'53		
opposition	-553 Aug 24 j 17:26	24°♄05'40	-5°-55'-6	max. Earth dist.	-548 Oct 13 j 07:46	24°♄52'00	2.44133 AU	
direct	-553 Sep 24 j 02:54	18°♄34'14			-548 Oct 20 j 07:24	0°♄		
	-553 Nov 09 j 08:06	0°♆						
asc. node	-553 Dec 19 j 04:02	20°♆03'17		conjunction	-548 Nov 21 j 09:59	24°♄07'21	0°-27'-26	
	-552 Jan 05 j 14:48	0°♄		minimum elong	-548 Nov 21 j 08:18	24°♄04'07	0°27'25	
	-552 Feb 24 j 14:45	0°♄			-548 Nov 29 j 02:10	0°♄		
	-552 Apr 13 j 08:45	0°♅			-547 Jan 06 j 15:44	0°♅		
	-552 May 31 j 15:43	0°♅		morning rise	-547 Jan 23 j 11:40	13°♅13'29		
evening set	-552 Jul 08 j 02:22	23°♅34'49			-547 Feb 13 j 20:25	0°♆		
	-552 Jul 18 j 04:16	0°♄			-547 Mar 24 j 13:35	0°♆		
max. Earth dist.	-552 Aug 06 j 17:56	12°♄34'45	2.64394 AU		-547 May 03 j 16:28	0°♄		
					-547 Jun 15 j 03:05	0°♄		
conjunction	-552 Aug 23 j 00:45	23°♄10'28	1°03'59		-547 Jul 31 j 04:37	0°♅		
minimum elong	-552 Aug 23 j 01:38	23°♄11'54	1°03'59	asc. node	-547 Aug 10 j 00:30	5°♅58'35		
	-552 Sep 02 j 09:56	0°♄			-547 Sep 22 j 21:51	0°♅		
morning rise	-552 Oct 07 j 14:05	23°♄33'38		retrograde	-547 Nov 25 j 11:51	18°♅31'01		
	-552 Oct 17 j 00:27	0°♄		opposition	-546 Jan 04 j 12:10	8°♅47'53	4°18'12	
	-552 Nov 28 j 22:45	0°♄		greatest brilliancy	-546 Jan 04 j 09:23	8°♅50'40	-1.2m	
desc. node	-551 Jan 04 j 17:22	26°♄33'28		min. Earth dist.	-546 Jan 04 j 06:51	8°♅53'12	0.67464 AU	
	-551 Jan 09 j 10:05	0°♄			-546 Feb 01 j 17:24	30°♄		

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 36

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

direct	-546 Feb 14 j 01:41	29°II01'22		minimum elong	-541 May 25 j 05:02	26°808'32	0°30'23
	-546 Feb 27 j 02:20	0°☾			-541 May 31 j 01:40	0°II	
	-546 May 15 j 07:30	0°♂		max. Earth dist.	-541 Jun 12 j 09:11	8°II03'15	2.62547 AU
	-546 Jul 05 j 12:39	0°♍		morning rise	-541 Jul 13 j 06:12	27°II58'16	
	-546 Aug 19 j 22:51	0°♊			-541 Jul 16 j 10:24	0°☾	
desc. node	-546 Aug 27 j 15:06	5°♊20'17			-541 Sep 01 j 21:33	0°♂	
	-546 Sep 30 j 21:16	0°♌			-541 Oct 20 j 08:13	0°♍	
	-546 Nov 09 j 12:23	0°♎			-541 Dec 09 j 14:53	0°♊	
evening set	-546 Nov 24 j 01:25	11°♎18'14			-540 Feb 04 j 02:12	0°♌	
	-546 Dec 17 j 20:28	0°♏		retrograde	-540 Apr 06 j 03:43	17°♌24'34	
	-545 Jan 24 j 20:57	0°♐		desc. node	-540 Apr 18 j 11:24	16°♌27'43	
				opposition	-540 May 08 j 21:13	11°♌18'14	-1°-12'-54
conjunction	-545 Jan 28 j 23:45	3°♐13'54	-1°-5'-26	greatest brilliancy	-540 May 09 j 10:29	11°♌07'45	-2.4m
minimum elong	-545 Jan 29 j 00:09	3°♐14'40	1°05'27	min. Earth dist.	-540 May 16 j 21:17	8°♌46'58	0.43971 AU
	-545 Mar 04 j 12:07	0°♑		direct	-540 Jun 13 j 13:28	3°♌56'10	
max. Earth dist.	-545 Mar 17 j 01:48	9°♑33'23	2.39531 AU		-540 Aug 23 j 09:39	0°♎	
morning rise	-545 Apr 07 j 16:33	25°♑41'26			-540 Oct 07 j 16:43	0°♏	
	-545 Apr 13 j 13:21	0°♒			-540 Nov 18 j 11:32	0°♐	
	-545 May 25 j 15:55	0°♓			-540 Dec 30 j 00:39	0°♑	
asc. node	-545 Jun 28 j 00:12	22°♓34'25			-539 Feb 10 j 14:40	0°♒	
	-545 Jul 09 j 08:01	0°♊		asc. node	-539 Feb 16 j 20:45	4°♒19'12	
	-545 Aug 26 j 07:30	0°☾			-539 Mar 26 j 17:46	0°♓	
	-545 Oct 19 j 15:22	0°♈			-539 May 11 j 09:28	0°♊	
retrograde	-545 Dec 30 j 23:32	22°♈02'08		evening set	-539 May 16 j 11:10	3°♊17'00	
opposition	-544 Feb 07 j 23:36	12°♈58'09	4°35'44		-539 Jun 27 j 02:25	0°☾	
greatest brilliancy	-544 Feb 08 j 16:53	12°♈41'12	-1.3m				
min. Earth dist.	-544 Feb 11 j 15:09	11°♈32'17	0.65362 AU	conjunction	-539 Jul 03 j 11:54	4°☾04'45	1°02'44
direct	-544 Mar 20 j 07:11	2°♈56'35		minimum elong	-539 Jul 03 j 10:55	4°☾03'10	1°02'44
	-544 Jun 08 j 14:50	0°♍		max. Earth dist.	-539 Jul 06 j 01:30	5°☾42'56	2.67107 AU
desc. node	-544 Jul 14 j 13:23	21°♍16'35			-539 Aug 13 j 04:09	0°♈	
	-544 Jul 28 j 00:53	0°♊		morning rise	-539 Aug 17 j 19:23	2°♈57'25	
	-544 Sep 09 j 03:44	0°♌			-539 Sep 29 j 00:35	0°♍	
	-544 Oct 19 j 04:06	0°♎			-539 Nov 14 j 09:44	0°♊	
	-544 Nov 26 j 15:56	0°♏			-539 Dec 30 j 11:51	0°♌	
	-543 Jan 03 j 20:02	0°♐			-538 Feb 14 j 22:19	0°♎	
evening set	-543 Feb 01 j 10:54	22°♐11'04		desc. node	-538 Mar 06 j 11:00	12°♎19'39	
	-543 Feb 11 j 16:36	0°♑			-538 Apr 04 j 17:31	0°♏	
	-543 Mar 24 j 00:33	0°♒			-538 Jun 21 j 10:47	0°♐	
				retrograde	-538 Jun 24 j 09:49	0°♐03'34	
conjunction	-543 Apr 05 j 06:26	8°♒50'22	0°-24'-2		-538 Jun 27 j 08:45	30°♒3	
minimum elong	-543 Apr 05 j 07:58	8°♒53'08	0°24'02	min. Earth dist.	-538 Jul 22 j 16:14	25°♒27'16	0.37711 AU
	-543 May 05 j 07:55	0°♓		opposition	-538 Jul 25 j 05:53	24°♒45'32	-6°-51'-38
max. Earth dist.	-543 May 13 j 10:05	5°♓34'02	2.52722 AU	greatest brilliancy	-538 Jul 24 j 13:35	24°♒56'35	-2.8m
asc. node	-543 May 14 j 23:57	6°♓38'49		direct	-538 Aug 23 j 22:05	19°♒48'29	
morning rise	-543 Jun 01 j 09:51	18°♓26'31			-538 Oct 05 j 06:27	0°♐	
	-543 Jun 18 j 19:13	0°♊			-538 Nov 30 j 05:47	0°♑	
	-543 Aug 04 j 09:46	0°☾		asc. node	-537 Jan 04 j 20:06	22°♑03'43	
	-543 Sep 22 j 09:19	0°♈			-537 Jan 17 j 09:17	0°♒	
	-543 Nov 14 j 17:34	0°♍			-537 Mar 05 j 14:00	0°♓	
retrograde	-542 Feb 09 j 09:16	29°♍01'19			-537 Apr 22 j 00:59	0°♊	
opposition	-542 Mar 18 j 03:20	21°♍03'09	3°14'16		-537 Jun 08 j 16:42	0°☾	
greatest brilliancy	-542 Mar 19 j 08:30	20°♍36'00	-1.7m	evening set	-537 Jun 24 j 12:55	10°☾00'15	
min. Earth dist.	-542 Mar 25 j 08:49	18°♍22'12	0.56850 AU		-537 Jul 25 j 23:38	0°♈	
direct	-542 Apr 27 j 08:47	11°♍30'01		max. Earth dist.	-537 Jul 29 j 08:28	2°♈09'23	2.66218 AU
desc. node	-542 Jun 01 j 12:27	18°♍33'34					
	-542 Jun 27 j 01:16	0°♊		conjunction	-537 Aug 09 j 12:01	9°♈19'09	1°08'56
	-542 Aug 15 j 10:55	0°♌		minimum elong	-537 Aug 09 j 12:23	9°♈19'45	1°08'56
	-542 Sep 26 j 10:38	0°♎			-537 Sep 10 j 06:57	0°♍	
	-542 Nov 04 j 21:55	0°♏		morning rise	-537 Sep 23 j 07:47	8°♍36'18	
	-542 Dec 13 j 19:15	0°♐			-537 Oct 25 j 05:16	0°♊	
	-541 Jan 22 j 08:12	0°♑			-537 Dec 07 j 17:01	0°♌	
	-541 Mar 04 j 08:25	0°♒			-536 Jan 18 j 22:15	0°♎	
evening set	-541 Apr 01 j 20:34	20°♒05'05		desc. node	-536 Jan 22 j 10:46	2°♎32'10	
asc. node	-541 Apr 01 j 22:05	20°♒07'41			-536 Feb 29 j 06:19	0°♏	
	-541 Apr 16 j 06:09	0°♓			-536 Apr 10 j 11:59	0°♐	
					-536 May 23 j 11:31	0°♑	
conjunction	-541 May 25 j 06:16	26°♓10'33	0°30'24		-536 Jul 14 j 02:13	0°♒	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 37

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

retrograde	-536 Aug 25 j 15:55	11° Υ 01'57			-531 Aug 27 j 11:44	0° Ω	
min. Earth dist.	-536 Sep 23 j 09:05	5° Υ 20'59	0.47611 AU	desc. node	-531 Sep 13 j 07:11	11° Ω 50'06	
greatest brilliancy	-536 Sep 30 j 08:59	2° Υ 50'55	-2.2m		-531 Oct 08 j 07:19	0° \mathbb{M}	
opposition	-536 Oct 01 j 10:30	2° Υ 27'57	-2°-38'-30	evening set	-531 Oct 30 j 12:32	16° \mathbb{M} 38'58	
	-536 Oct 08 j 14:39	30° \mathbb{R} \mathbb{X}			-531 Nov 16 j 22:57	0° \mathbb{X}	
direct	-536 Nov 03 j 16:58	25° \mathbb{X} 30'50		max. Earth dist.	-531 Dec 15 j 00:59	21° \mathbb{X} 53'23	2.37509 AU
asc. node	-536 Nov 21 j 18:29	27° \mathbb{X} 30'30			-531 Dec 25 j 08:23	0° \mathbb{Z}	
	-536 Dec 01 j 14:48	0° Υ					
	-535 Feb 06 j 00:14	0° \mathbb{B}		conjunction	-531 Dec 31 j 12:25	4° \mathbb{Z} 51'50	0°-59'-30
	-535 Mar 30 j 13:53	0° \mathbb{I}		minimum elong	-531 Dec 31 j 10:08	4° \mathbb{Z} 47'19	0°59'31
	-535 May 19 j 10:33	0° \mathbb{S}			-530 Feb 01 j 09:40	0° \approx	
	-535 Jul 06 j 14:44	0° Ω		morning rise	-530 Mar 11 j 01:05	29° \approx 15'03	
evening set	-535 Jul 31 j 05:09	15° Ω 45'50			-530 Mar 12 j 00:34	0° \mathbb{X}	
	-535 Aug 21 j 23:14	0° \mathbb{P}			-530 Apr 21 j 01:06	0° Υ	
max. Earth dist.	-535 Aug 22 j 22:26	0° \mathbb{P} 38'23	2.60039 AU		-530 Jun 02 j 04:23	0° \mathbb{B}	
				asc. node	-530 Jul 14 j 16:06	28° \mathbb{B} 24'10	
conjunction	-535 Sep 15 j 23:48	16° \mathbb{P} 45'40	0°47'20		-530 Jul 17 j 03:39	0° \mathbb{I}	
minimum elong	-535 Sep 16 j 01:08	16° \mathbb{P} 47'56	0°47'19		-530 Sep 04 j 08:18	0° \mathbb{S}	
	-535 Oct 05 j 07:17	0° Ω			-530 Nov 04 j 08:17	0° Ω	
morning rise	-535 Nov 02 j 23:13	20° Ω 09'10		retrograde	-530 Dec 16 j 19:43	9° Ω 03'34	
	-535 Nov 16 j 16:07	0° \mathbb{M}			-529 Jan 24 j 13:52	30° \mathbb{R} \mathbb{S}	
desc. node	-535 Dec 09 j 09:32	16° \mathbb{M} 37'04		opposition	-529 Jan 25 j 08:24	29° \mathbb{S} 41'39	4°38'32
	-535 Dec 27 j 09:03	0° \mathbb{X}		greatest brilliancy	-529 Jan 25 j 17:38	29° \mathbb{S} 32'30	-1.2m
	-534 Feb 04 j 22:28	0° \mathbb{Z}		min. Earth dist.	-529 Jan 27 j 11:36	28° \mathbb{S} 50'54	0.66967 AU
	-534 Mar 16 j 01:07	0° \approx		direct	-529 Mar 07 j 13:14	19° \mathbb{S} 42'25	
	-534 Apr 24 j 16:09	0° \mathbb{X}			-529 Apr 22 j 08:52	0° Ω	
	-534 Jun 05 j 05:32	0° Υ			-529 Jun 20 j 14:12	0° \mathbb{P}	
	-534 Jul 21 j 15:05	0° \mathbb{B}		desc. node	-529 Aug 01 j 05:55	26° \mathbb{P} 17'11	
retrograde	-534 Oct 08 j 03:01	28° \mathbb{B} 44'30			-529 Aug 06 j 18:38	0° Ω	
asc. node	-534 Oct 09 j 17:15	28° \mathbb{B} 43'25			-529 Sep 18 j 06:21	0° \mathbb{M}	
min. Earth dist.	-534 Nov 11 j 04:44	21° \mathbb{B} 01'46	0.59591 AU		-529 Oct 28 j 01:17	0° \mathbb{X}	
opposition	-534 Nov 16 j 15:54	18° \mathbb{B} 51'43	1°36'08		-529 Dec 05 j 10:23	0° \mathbb{Z}	
greatest brilliancy	-534 Nov 16 j 03:52	19° \mathbb{B} 03'39	-1.6m	greatest brilliancy	-529 Dec 27 j 04:00	17° \mathbb{Z} 09'10	1.2m
direct	-534 Dec 23 j 21:59	10° \mathbb{B} 14'01		evening set	-528 Jan 06 j 01:17	24° \mathbb{Z} 56'24	
	-533 Mar 01 j 20:03	0° \mathbb{I}			-528 Jan 12 j 11:50	0° \approx	
	-533 Apr 27 j 19:04	0° \mathbb{S}			-528 Feb 20 j 04:56	0° \mathbb{X}	
	-533 Jun 17 j 06:41	0° Ω					
	-533 Aug 03 j 08:40	0° \mathbb{P}		conjunction	-528 Mar 12 j 05:33	15° \mathbb{X} 52'16	0°-46'-4
evening set	-533 Sep 10 j 06:20	25° \mathbb{P} 34'20		minimum elong	-528 Mar 12 j 08:19	15° \mathbb{X} 57'25	0°46'03
	-533 Sep 16 j 15:17	0° Ω			-528 Mar 31 j 08:52	0° Υ	
max. Earth dist.	-533 Sep 25 j 09:57	6° Ω 09'36	2.49174 AU	max. Earth dist.	-528 Apr 27 j 15:35	19° Υ 35'13	2.47683 AU
desc. node	-533 Oct 27 j 08:14	29° Ω 09'18			-528 May 12 j 12:46	0° \mathbb{B}	
	-533 Oct 28 j 11:50	0° \mathbb{M}		morning rise	-528 May 13 j 00:50	0° \mathbb{B} 20'55	
				asc. node	-528 May 31 j 14:53	13° \mathbb{B} 04'39	
conjunction	-533 Oct 31 j 18:16	2° \mathbb{M} 24'26	0°-2'-53		-528 Jun 25 j 23:36	0° \mathbb{I}	
minimum elong	-533 Oct 31 j 18:07	2° \mathbb{M} 24'11	0°02'55		-528 Aug 11 j 21:46	0° \mathbb{S}	
behind sun begin	-533 Oct 30 j 19:35	1° \mathbb{M} 42'37			-528 Oct 01 j 03:02	0° Ω	
behind sun end	-533 Nov 01 j 16:40	3° \mathbb{M} 05'47			-528 Nov 28 j 18:34	0° \mathbb{P}	
	-533 Dec 07 j 11:01	0° \mathbb{X}		retrograde	-527 Jan 23 j 03:36	14° \mathbb{P} 02'20	
morning rise	-533 Dec 28 j 02:41	15° \mathbb{X} 54'14		opposition	-527 Mar 01 j 23:01	5° \mathbb{P} 34'12	4°00'58
	-532 Jan 15 j 05:27	0° \mathbb{Z}		greatest brilliancy	-527 Mar 03 j 02:14	5° \mathbb{P} 08'09	-1.5m
	-532 Feb 22 j 14:13	0° \approx		min. Earth dist.	-527 Mar 07 j 20:59	3° \mathbb{P} 18'40	0.60893 AU
	-532 Apr 01 j 10:28	0° \mathbb{X}			-527 Mar 17 j 06:31	30° \mathbb{R} Ω	
	-532 May 11 j 17:05	0° Υ		direct	-527 Apr 11 j 21:26	25° Ω 42'22	
	-532 Jun 23 j 12:58	0° \mathbb{B}			-527 May 09 j 05:43	0° \mathbb{P}	
	-532 Aug 09 j 23:05	0° \mathbb{I}		desc. node	-527 Jun 18 j 04:14	16° \mathbb{P} 55'40	
asc. node	-532 Aug 26 j 17:12	9° \mathbb{I} 27'40			-527 Jul 11 j 04:51	0° Ω	
	-532 Oct 11 j 13:46	0° \mathbb{S}			-527 Aug 25 j 16:50	0° \mathbb{M}	
retrograde	-532 Nov 12 j 02:46	5° \mathbb{S} 33'53			-527 Oct 05 j 13:39	0° \mathbb{X}	
	-532 Dec 11 j 03:45	30° \mathbb{R} \mathbb{I}			-527 Nov 13 j 12:01	0° \mathbb{Z}	
min. Earth dist.	-532 Dec 20 j 12:07	26° \mathbb{I} 23'26	0.66476 AU		-527 Dec 22 j 00:06	0° \approx	
opposition	-532 Dec 22 j 05:51	25° \mathbb{I} 41'30	3°50'15		-526 Jan 30 j 04:26	0° \mathbb{X}	
greatest brilliancy	-532 Dec 21 j 20:44	25° \mathbb{I} 50'39	-1.3m	evening set	-526 Mar 11 j 18:29	29° \mathbb{X} 56'38	
direct	-531 Jan 31 j 03:33	16° \mathbb{I} 08'32			-526 Mar 11 j 20:21	0° Υ	
	-531 Mar 27 j 08:03	0° \mathbb{S}		asc. node	-526 Apr 18 j 14:17	26° Υ 39'21	
	-531 May 25 j 06:39	0° Ω			-526 Apr 23 j 10:39	0° \mathbb{B}	
	-531 Jul 13 j 14:20	0° \mathbb{P}					

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 38

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

conjunction	-526 May 07 j 10:38	9°♄33'23	0°11'17	retrograde	-521 Aug 05 j 07:14	16°♄40'14	
minimum elong	-526 May 07 j 10:03	9°♄32'23	0°11'18	min. Earth dist.	-521 Sep 01 j 05:05	11°♄49'11	0.42627 AU
behind sun begin	-526 May 06 j 18:09	9°♄05'26		greatest brilliancy	-521 Sep 07 j 07:11	9°♄51'18	-2.5m
behind sun end	-526 May 08 j 01:58	9°♄59'19		opposition	-521 Sep 08 j 21:56	9°♄19'45	-4°-48'-20
max. Earth dist.	-526 Jun 01 j 22:30	26°♄37'31	2.59297 AU	direct	-521 Oct 10 j 08:04	3°♄17'56	
	-526 Jun 07 j 01:12	0°♄		asc. node	-521 Dec 09 j 10:57	20°♄52'29	
morning rise	-526 Jun 27 j 23:34	13°♄40'22			-521 Dec 27 j 11:19	0°♄	
	-526 Jul 23 j 09:55	0°♄			-520 Feb 18 j 06:23	0°♄	
	-526 Sep 09 j 06:35	0°♄			-520 Apr 08 j 00:55	0°♄	
	-526 Oct 28 j 22:34	0°♄			-520 May 26 j 19:06	0°♄	
	-526 Dec 21 j 21:19	0°♄			-520 Jul 13 j 12:46	0°♄	
retrograde	-525 Mar 13 j 05:17	26°♄32'27		evening set	-520 Jul 16 j 11:10	1°♄52'15	
opposition	-525 Apr 16 j 19:41	19°♄36'10	1°01'50	max. Earth dist.	-520 Aug 12 j 10:51	19°♄16'08	2.63064 AU
greatest brilliancy	-525 Apr 17 j 09:09	19°♄24'35	-2.1m		-520 Aug 28 j 19:36	0°♄	
min. Earth dist.	-525 Apr 25 j 08:12	16°♄41'05	0.49148 AU				
desc. node	-525 May 06 j 04:11	13°♄28'35		conjunction	-520 Aug 31 j 13:18	1°♄48'35	0°59'08
direct	-525 May 24 j 20:20	11°♄05'41		minimum elong	-520 Aug 31 j 14:24	1°♄50'26	0°59'08
	-525 Jul 23 j 04:53	0°♄			-520 Oct 12 j 07:54	0°♄	
	-525 Sep 08 j 20:09	0°♄		morning rise	-520 Oct 16 j 18:10	3°♄03'11	
	-525 Oct 20 j 08:08	0°♄			-520 Nov 24 j 01:20	0°♄	
	-525 Nov 29 j 10:21	0°♄		desc. node	-520 Dec 26 j 01:36	23°♄14'23	
	-524 Jan 08 j 21:16	0°♄			-519 Jan 04 j 05:28	0°♄	
	-524 Feb 19 j 15:55	0°♄			-519 Feb 13 j 07:15	0°♄	
asc. node	-524 Mar 05 j 12:08	10°♄22'23			-519 Mar 24 j 23:03	0°♄	
	-524 Apr 03 j 04:30	0°♄			-519 May 04 j 06:49	0°♄	
evening set	-524 Apr 29 j 21:24	17°♄49'55			-519 Jun 16 j 06:06	0°♄	
	-524 May 18 j 10:14	0°♄			-519 Aug 07 j 07:40	0°♄	
				retrograde	-519 Sep 22 j 13:07	12°♄13'47	
conjunction	-524 Jun 18 j 13:21	20°♄08'54	0°53'15	min. Earth dist.	-519 Oct 24 j 14:53	5°♄14'35	0.55340 AU
minimum elong	-524 Jun 18 j 12:02	20°♄06'47	0°53'14	asc. node	-519 Oct 26 j 09:57	4°♄33'11	
max. Earth dist.	-524 Jun 26 j 18:10	25°♄24'42	2.65975 AU	opposition	-519 Oct 31 j 08:59	2°♄37'26	0°13'45
	-524 Jul 03 j 22:14	0°♄		greatest brilliancy	-519 Nov 13 j 21:20	27°♄53'25	-1.9m
morning rise	-524 Aug 03 j 21:02	19°♄43'10			-519 Nov 07 j 09:39	30°♄	
	-524 Aug 20 j 01:35	0°♄		direct	-519 Dec 06 j 05:02	24°♄32'25	
	-524 Oct 06 j 08:48	0°♄			-518 Jan 06 j 22:31	0°♄	
	-524 Nov 22 j 19:06	0°♄			-518 Mar 14 j 10:07	0°♄	
	-523 Jan 10 j 00:25	0°♄			-518 May 06 j 08:53	0°♄	
	-523 Mar 02 j 07:25	0°♄			-518 Jun 24 j 16:41	0°♄	
desc. node	-523 Mar 23 j 03:57	10°♄50'09			-518 Aug 10 j 09:54	0°♄	
retrograde	-523 May 23 j 07:38	28°♄50'54		evening set	-518 Aug 24 j 12:52	9°♄23'57	
opposition	-523 Jun 22 j 15:35	23°♄49'54	-5°-32'-13	max. Earth dist.	-518 Sep 10 j 17:32	21°♄03'31	2.53901 AU
greatest brilliancy	-523 Jun 23 j 07:44	23°♄39'02	-2.8m		-518 Sep 23 j 16:08	0°♄	
min. Earth dist.	-523 Jun 25 j 12:35	23°♄03'33	0.38108 AU				
direct	-523 Jul 23 j 13:19	18°♄29'30		conjunction	-518 Oct 12 j 14:00	13°♄19'02	0°19'43
	-523 Sep 06 j 00:35	0°♄		minimum elong	-518 Oct 12 j 14:53	13°♄20'36	0°19'42
	-523 Oct 28 j 19:07	0°♄			-518 Nov 04 j 16:42	0°♄	
	-523 Dec 13 j 09:45	0°♄		desc. node	-518 Nov 13 j 00:53	6°♄07'38	
asc. node	-522 Jan 21 j 10:41	26°♄07'00		morning rise	-518 Dec 04 j 06:46	21°♄57'54	
	-522 Jan 27 j 06:43	0°♄			-518 Dec 14 j 21:42	0°♄	
	-522 Mar 13 j 20:35	0°♄			-517 Jan 22 j 22:05	0°♄	
	-522 Apr 29 j 10:07	0°♄			-517 Mar 02 j 12:02	0°♄	
evening set	-522 Jun 09 j 19:10	26°♄18'49			-517 Apr 10 j 12:50	0°♄	
	-522 Jun 15 j 14:39	0°♄			-517 May 21 j 02:02	0°♄	
max. Earth dist.	-522 Jul 20 j 08:56	22°♄05'29	2.67212 AU		-517 Jul 03 j 15:00	0°♄	
					-517 Aug 22 j 18:31	0°♄	
conjunction	-522 Jul 26 j 05:30	25°♄49'42	1°09'43	asc. node	-517 Sep 13 j 08:22	10°♄24'39	
minimum elong	-522 Jul 26 j 05:19	25°♄49'24	1°09'42	retrograde	-517 Oct 30 j 13:05	22°♄07'23	
	-522 Aug 01 j 18:06	0°♄		min. Earth dist.	-517 Dec 06 j 09:10	13°♄27'53	0.64521 AU
morning rise	-522 Sep 08 j 20:47	24°♄34'14		opposition	-517 Dec 09 j 14:51	12°♄09'56	3°09'47
	-522 Sep 17 j 04:48	0°♄		greatest brilliancy	-517 Dec 09 j 01:34	12°♄23'15	-1.4m
	-522 Nov 01 j 13:38	0°♄		direct	-516 Jan 17 j 15:49	2°♄54'38	
	-522 Dec 15 j 19:33	0°♄			-516 Apr 10 j 01:10	0°♄	
	-521 Jan 28 j 02:52	0°♄			-516 Jun 03 j 01:23	0°♄	
desc. node	-521 Feb 08 j 02:38	7°♄41'04			-516 Jul 21 j 05:34	0°♄	
	-521 Mar 11 j 22:48	0°♄			-516 Sep 03 j 19:10	0°♄	
	-521 Apr 24 j 12:26	0°♄		desc. node	-516 Sep 29 j 23:23	18°♄35'10	
	-521 Jun 12 j 11:18	0°♄		evening set	-516 Oct 08 j 18:10	24°♄58'27	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 39

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-516 Oct 15 j 14:18	0°♌				-511 Jun 14 j 01:38	0°♐		
max. Earth dist.	-516 Oct 27 j 18:54	9°♌03'59	2.41392 AU			-511 Jul 30 j 12:38	0°♐		
	-516 Nov 24 j 08:16	0°♏				-511 Sep 16 j 23:43	0°♑		
						-511 Nov 07 j 13:38	0°♑		
conjunction	-516 Dec 05 j 01:14	8°♏16'19	0°-40'-59			-510 Jan 09 j 06:15	0°♑		
minimum elong	-516 Dec 04 j 22:47	8°♏11'33	0°40'58		retrograde	-510 Feb 20 j 02:23	8°♑41'19		
	-515 Jan 01 j 20:31	0°♐			opposition	-510 Mar 28 j 04:41	1°♑02'40	2°35'12	
	-515 Feb 08 j 23:54	0°♑			greatest brilliancy	-510 Mar 29 j 07:29	0°♑38'14	-1.8m	
morning rise	-515 Feb 09 j 03:30	0°♑07'03				-510 Mar 31 j 01:21	30°♑		
	-515 Mar 19 j 15:38	0°♒			min. Earth dist.	-510 Apr 05 j 00:57	28°♑12'00	0.54279 AU	
	-515 Apr 28 j 16:33	0°♒			direct	-510 May 06 j 19:47	21°♑46'27		
	-515 Jun 09 j 22:38	0°♓			desc. node	-510 May 22 j 20:22	23°♑24'13		
	-515 Jul 25 j 10:30	0°♐				-510 Jun 13 j 15:15	0°♑		
asc. node	-515 Jul 31 j 08:09	3°♐41'14				-510 Aug 08 j 01:50	0°♌		
	-515 Sep 14 j 19:11	0°♐				-510 Sep 20 j 06:45	0°♏		
retrograde	-515 Dec 03 j 04:06	26°♐17'31				-510 Oct 30 j 06:21	0°♐		
opposition	-514 Jan 12 j 01:46	16°♐40'53	4°29'05			-510 Dec 08 j 11:19	0°♑		
greatest brilliancy	-514 Jan 12 j 03:02	16°♐39'37	-1.2m			-509 Jan 17 j 05:52	0°♒		
min. Earth dist.	-514 Jan 12 j 16:20	16°♐26'20	0.67570 AU			-509 Feb 27 j 10:40	0°♒		
direct	-514 Feb 21 j 22:44	6°♐48'39			asc. node	-509 Mar 23 j 04:29	16°♒42'32		
	-514 May 07 j 19:08	0°♑				-509 Apr 11 j 12:04	0°♓		
	-514 Jun 29 j 22:24	0°♑			evening set	-509 Apr 12 j 21:13	0°♓56'28		
	-514 Aug 14 j 21:24	0°♑				-509 May 26 j 09:51	0°♐		
desc. node	-514 Aug 17 j 22:35	2°♑05'48							
	-514 Sep 26 j 00:18	0°♌			conjunction	-509 Jun 03 j 19:01	5°♐28'59	0°39'53	
	-514 Nov 04 j 16:36	0°♏			minimum elong	-509 Jun 03 j 17:38	5°♐26'44	0°39'53	
evening set	-514 Dec 09 j 04:48	26°♏58'36			max. Earth dist.	-509 Jun 18 j 05:37	14°♐51'48	2.63989 AU	
	-514 Dec 13 j 00:48	0°♐				-509 Jul 11 j 18:43	0°♐		
	-513 Jan 20 j 01:16	0°♑			morning rise	-509 Jul 21 j 16:10	6°♐18'47		
						-509 Aug 28 j 02:03	0°♑		
conjunction	-513 Feb 14 j 05:13	19°♑38'09	-1°-1'-52			-509 Oct 15 j 00:39	0°♑		
minimum elong	-513 Feb 14 j 07:14	19°♑42'03	1°01'53			-509 Dec 03 j 00:12	0°♑		
	-513 Feb 27 j 16:30	0°♒				-508 Jan 24 j 02:36	0°♌		
max. Earth dist.	-513 Apr 05 j 20:57	27°♒53'41	2.42349 AU			-508 Apr 06 j 21:24	0°♏		
	-513 Apr 08 j 17:53	0°♒			desc. node	-508 Apr 08 j 19:31	0°♏18'47		
morning rise	-513 Apr 21 j 19:48	9°♒29'47			retrograde	-508 Apr 22 j 02:29	1°♏21'51		
	-513 May 20 j 19:53	0°♓				-508 May 06 j 20:43	30°♌		
asc. node	-513 Jun 18 j 07:03	19°♓23'04			opposition	-508 May 23 j 18:48	25°♌43'47	-2°-46'-46	
	-513 Jul 04 j 08:22	0°♐			greatest brilliancy	-508 May 24 j 17:51	25°♌26'32	-2.6m	
	-513 Aug 20 j 19:17	0°♐			min. Earth dist.	-508 May 30 j 14:20	23°♌41'54	0.41383 AU	
	-513 Oct 12 j 02:00	0°♑			direct	-508 Jun 26 j 19:00	19°♌07'22		
	-512 Jan 04 j 03:16	0°♑				-508 Aug 08 j 05:57	0°♏		
retrograde	-512 Jan 08 j 10:11	0°♑06'43				-508 Sep 28 j 22:59	0°♐		
	-512 Jan 12 j 15:21	30°♑				-508 Nov 11 j 13:07	0°♑		
opposition	-512 Feb 16 j 01:45	21°♑14'03	4°27'27			-508 Dec 24 j 00:55	0°♒		
greatest brilliancy	-512 Feb 16 j 23:03	20°♑53'17	-1.4m			-507 Feb 05 j 05:11	0°♒		
min. Earth dist.	-512 Feb 20 j 12:53	19°♑29'49	0.64059 AU		asc. node	-507 Feb 07 j 03:42	1°♒19'34		
direct	-512 Mar 28 j 08:31	11°♑13'47				-507 Mar 21 j 17:51	0°♓		
	-512 May 31 j 01:49	0°♑				-507 May 06 j 15:33	0°♐		
desc. node	-512 Jul 04 j 21:56	19°♑18'12			evening set	-507 May 25 j 12:32	12°♐08'20		
	-512 Jul 22 j 00:15	0°♑				-507 Jun 22 j 11:34	0°♐		
	-512 Sep 03 j 19:04	0°♌							
	-512 Oct 14 j 01:25	0°♏			conjunction	-507 Jul 11 j 20:44	12°♐20'37	1°06'27	
	-512 Nov 21 j 16:06	0°♐			minimum elong	-507 Jul 11 j 20:01	12°♐19'28	1°06'27	
	-512 Dec 29 j 22:05	0°♑			max. Earth dist.	-507 Jul 11 j 09:28	12°♐02'40	2.67371 AU	
	-511 Feb 06 j 20:13	0°♒				-507 Aug 08 j 13:22	0°♑		
evening set	-511 Feb 16 j 02:14	6°♒59'07			morning rise	-507 Aug 25 j 19:31	11°♑02'42		
	-511 Mar 19 j 05:44	0°♒				-507 Sep 24 j 05:43	0°♑		
						-507 Nov 09 j 05:05	0°♌		
conjunction	-511 Apr 17 j 16:11	21°♒00'09	0°-10'-41			-507 Dec 24 j 12:29	0°♌		
minimum elong	-511 Apr 17 j 16:50	21°♒01'18	0°10'42			-506 Feb 07 j 12:20	0°♏		
behind sun begin	-511 Apr 16 j 22:50	20°♒29'45			desc. node	-506 Feb 24 j 19:19	11°♏28'29		
behind sun end	-511 Apr 18 j 10:51	21°♒32'49				-506 Mar 25 j 03:51	0°♐		
	-511 Apr 30 j 14:25	0°♓				-506 May 14 j 09:06	0°♑		
asc. node	-511 May 05 j 05:02	3°♓10'37			retrograde	-506 Jul 10 j 19:13	18°♑01'26		
max. Earth dist.	-511 May 21 j 05:10	14°♓04'54	2.55275 AU		min. Earth dist.	-506 Aug 06 j 16:57	13°♑35'33	0.38808 AU	
morning rise	-511 Jun 11 j 13:17	28°♓20'24			opposition	-506 Aug 11 j 21:02	12°♑06'53	-6°-33'-31	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 40

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

greatest brilliancy	-506 Aug 10 j 12:52	12° \approx 29'56	-2.8m	conjunction	-501 Nov 12 j 15:41	14° \mathbb{M} 45'19	0°-16'-49
direct	-506 Sep 10 j 16:49	6° \approx 55'54		minimum elong	-501 Nov 12 j 14:40	14° \mathbb{M} 43'25	0°16'50
	-506 Nov 19 j 10:22	0° \mathbb{H}			-501 Dec 02 j 17:23	0° \mathbb{J}	
asc. node	-506 Dec 26 j 02:28	20° \mathbb{H} 50'29			-500 Jan 10 j 09:16	0° \mathbb{Z}	
	-505 Jan 10 j 07:05	0° \mathbb{Y}		morning rise	-500 Jan 12 j 03:01	1° \mathbb{Z} 21'43	
	-505 Feb 27 j 20:32	0° \mathbb{X}			-500 Feb 17 j 15:32	0° \approx	
	-505 Apr 16 j 23:10	0° \mathbb{II}		greatest brilliancy	-500 Feb 19 j 10:27	1° \approx 23'54	1.2m
	-505 Jun 03 j 22:49	0° \mathbb{S}			-500 Mar 27 j 09:13	0° \mathbb{H}	
evening set	-505 Jul 02 j 21:49	18° \mathbb{S} 15'02			-500 May 06 j 12:14	0° \mathbb{Y}	
	-505 Jul 21 j 09:07	0° \mathbb{Q}			-500 Jun 18 j 00:37	0° \mathbb{X}	
max. Earth dist.	-505 Aug 03 j 19:16	8° \mathbb{Q} 36'39	2.65304 AU		-500 Aug 03 j 11:02	0° \mathbb{II}	
				asc. node	-500 Aug 16 j 22:47	8° \mathbb{II} 00'27	
conjunction	-505 Aug 17 j 19:11	17° \mathbb{Q} 39'42	1°06'33		-500 Sep 28 j 09:08	0° \mathbb{S}	
minimum elong	-505 Aug 17 j 19:52	17° \mathbb{Q} 40'48	1°06'33	retrograde	-500 Nov 19 j 19:11	13° \mathbb{S} 30'33	
	-505 Sep 05 j 16:01	0° \mathbb{P}		opposition	-500 Dec 29 j 21:47	3° \mathbb{S} 42'45	4°08'01
morning rise	-505 Oct 01 j 22:56	17° \mathbb{P} 29'01		min. Earth dist.	-500 Dec 28 j 23:54	4° \mathbb{S} 04'42	0.67160 AU
	-505 Oct 20 j 10:37	0° \mathbb{A}		greatest brilliancy	-500 Dec 29 j 15:56	3° \mathbb{S} 48'38	-1.2m
	-505 Dec 02 j 15:25	0° \mathbb{M}			-499 Jan 08 j 11:33	30° \mathbb{R} \mathbb{II}	
desc. node	-504 Jan 12 j 17:37	29° \mathbb{M} 28'43		direct	-499 Feb 08 j 05:30	24° \mathbb{II} 01'51	
	-504 Jan 13 j 10:48	0° \mathbb{J}			-499 Mar 14 j 06:37	0° \mathbb{S}	
	-504 Feb 23 j 06:12	0° \mathbb{Z}			-499 May 18 j 22:33	0° \mathbb{Q}	
	-504 Apr 03 j 18:44	0° \approx			-499 Jul 08 j 08:19	0° \mathbb{P}	
	-504 May 15 j 09:32	0° \mathbb{H}			-499 Aug 22 j 14:21	0° \mathbb{A}	
	-504 Jun 30 j 17:36	0° \mathbb{Y}		desc. node	-499 Sep 03 j 15:12	8° \mathbb{A} 24'17	
retrograde	-504 Sep 05 j 08:54	23° \mathbb{Y} 26'32			-499 Oct 03 j 12:55	0° \mathbb{M}	
min. Earth dist.	-504 Oct 05 j 07:07	17° \mathbb{Y} 16'43	0.50437 AU	evening set	-499 Nov 12 j 23:44	0° \mathbb{J} 35'53	
greatest brilliancy	-504 Oct 12 j 10:09	14° \mathbb{Y} 37'50	-2.1m		-499 Nov 12 j 05:09	0° \mathbb{J}	
opposition	-504 Oct 13 j 01:06	14° \mathbb{Y} 23'55	-1°-29'-53		-499 Dec 20 j 14:06	0° \mathbb{Z}	
asc. node	-504 Nov 12 j 01:31	7° \mathbb{Y} 07'16					
direct	-504 Nov 16 j 06:01	7° \mathbb{Y} 00'12		conjunction	-498 Jan 16 j 09:43	21° \mathbb{Z} 10'22	-1°-4'-43
	-503 Jan 28 j 07:04	0° \mathbb{X}		minimum elong	-498 Jan 16 j 08:45	21° \mathbb{Z} 08'29	1°04'44
	-503 Mar 24 j 14:03	0° \mathbb{II}			-498 Jan 27 j 14:43	0° \approx	
	-503 May 14 j 07:56	0° \mathbb{S}		max. Earth dist.	-498 Feb 16 j 03:36	15° \approx 17'08	2.37741 AU
	-503 Jul 01 j 20:59	0° \mathbb{Q}			-498 Mar 07 j 04:56	0° \mathbb{H}	
evening set	-503 Aug 08 j 20:27	24° \mathbb{Q} 24'29		morning rise	-498 Mar 27 j 01:09	15° \mathbb{H} 03'13	
	-503 Aug 17 j 08:30	0° \mathbb{P}			-498 Apr 16 j 04:27	0° \mathbb{Y}	
max. Earth dist.	-503 Aug 29 j 07:53	7° \mathbb{P} 57'46	2.58025 AU		-498 May 28 j 05:40	0° \mathbb{X}	
				asc. node	-498 Jul 04 j 22:07	25° \mathbb{X} 25'32	
conjunction	-503 Sep 25 j 06:24	26° \mathbb{P} 15'47	0°38'28		-498 Jul 11 j 22:28	0° \mathbb{II}	
minimum elong	-503 Sep 25 j 07:43	26° \mathbb{P} 18'02	0°38'27		-498 Aug 29 j 06:23	0° \mathbb{S}	
	-503 Sep 30 j 16:03	0° \mathbb{A}			-498 Oct 24 j 10:34	0° \mathbb{Q}	
	-503 Nov 11 j 21:56	0° \mathbb{M}		retrograde	-498 Dec 24 j 20:21	16° \mathbb{Q} 55'42	
morning rise	-503 Nov 13 j 15:20	1° \mathbb{M} 15'13		opposition	-497 Feb 02 j 03:01	7° \mathbb{Q} 43'04	4°38'16
desc. node	-503 Nov 29 j 17:02	13° \mathbb{M} 02'26		greatest brilliancy	-497 Feb 02 j 16:42	7° \mathbb{Q} 29'34	-1.3m
	-503 Dec 22 j 10:26	0° \mathbb{J}		min. Earth dist.	-497 Feb 05 j 02:13	6° \mathbb{Q} 32'55	0.66214 AU
	-502 Jan 30 j 18:42	0° \mathbb{Z}			-497 Feb 24 j 14:39	30° \mathbb{R} \mathbb{S}	
	-502 Mar 10 j 16:08	0° \approx		direct	-497 Mar 15 j 10:46	27° \mathbb{S} 41'56	
	-502 Apr 19 j 00:38	0° \mathbb{H}			-497 Apr 04 j 13:41	0° \mathbb{Q}	
	-502 May 30 j 01:56	0° \mathbb{Y}			-497 Jun 13 j 19:40	0° \mathbb{P}	
	-502 Jul 13 j 23:39	0° \mathbb{X}		desc. node	-497 Jul 22 j 13:32	23° \mathbb{P} 37'31	
	-502 Sep 09 j 11:22	0° \mathbb{II}			-497 Aug 01 j 05:59	0° \mathbb{A}	
asc. node	-502 Sep 30 j 00:36	6° \mathbb{II} 06'52			-497 Sep 13 j 03:17	0° \mathbb{M}	
retrograde	-502 Oct 16 j 11:45	7° \mathbb{II} 51'23			-497 Oct 23 j 02:00	0° \mathbb{J}	
	-502 Nov 20 j 01:40	30° \mathbb{R} \mathbb{X}			-497 Nov 30 j 12:48	0° \mathbb{Z}	
min. Earth dist.	-502 Nov 20 j 14:28	29° \mathbb{X} 47'21	0.61606 AU		-496 Jan 07 j 15:29	0° \approx	
opposition	-502 Nov 25 j 07:17	27° \mathbb{X} 54'51	2°15'11	evening set	-496 Jan 21 j 16:17	10° \approx 57'25	
greatest brilliancy	-502 Nov 24 j 17:16	28° \mathbb{X} 08'49	-1.5m		-496 Feb 15 j 09:43	0° \mathbb{H}	
direct	-501 Jan 02 j 06:25	19° \mathbb{X} 02'12					
	-501 Feb 19 j 01:31	0° \mathbb{II}		conjunction	-496 Mar 26 j 04:51	29° \mathbb{H} 42'12	0°-33'-50
	-501 Apr 21 j 15:13	0° \mathbb{S}		minimum elong	-496 Mar 26 j 07:03	29° \mathbb{H} 46'12	0°33'48
	-501 Jun 12 j 03:23	0° \mathbb{Q}			-496 Mar 26 j 14:37	0° \mathbb{Y}	
	-501 Jul 29 j 14:07	0° \mathbb{P}		max. Earth dist.	-496 May 07 j 04:39	29° \mathbb{Y} 35'02	2.50527 AU
	-501 Sep 11 j 23:32	0° \mathbb{A}			-496 May 07 j 19:03	0° \mathbb{X}	
evening set	-501 Sep 20 j 08:53	5° \mathbb{A} 52'54		asc. node	-496 May 21 j 21:55	9° \mathbb{X} 42'34	
max. Earth dist.	-501 Oct 05 j 06:55	16° \mathbb{A} 30'22	2.46405 AU	morning rise	-496 May 24 j 08:30	11° \mathbb{X} 22'16	
desc. node	-501 Oct 17 j 16:48	25° \mathbb{A} 30'17			-496 Jun 21 j 04:25	0° \mathbb{II}	
	-501 Oct 23 j 19:57	0° \mathbb{M}			-496 Aug 06 j 20:29	0° \mathbb{S}	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 41

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-496 Sep 25 j 05:38	0°♈			-490 Jan 21 j 03:57	0°♐		
	-496 Nov 19 j 04:39	0°♑			-490 Mar 08 j 12:47	0°♑		
retrograde	-495 Feb 01 j 17:13	22°♑53'03			-490 Apr 24 j 12:46	0°♒		
opposition	-495 Mar 11 j 00:03	14°♑40'28	3°36'25		-490 Jun 10 j 23:00	0°♓		
greatest brilliancy	-495 Mar 12 j 04:49	14°♑13'19	-1.6m	evening set	-490 Jun 18 j 06:42	4°♓37'52		
min. Earth dist.	-495 Mar 17 j 16:14	12°♑09'50	0.58775 AU	max. Earth dist.	-490 Jul 25 j 16:17	28°♓23'45	2.66770 AU	
direct	-495 Apr 20 j 14:57	4°♑57'25			-490 Jul 28 j 04:31	0°♈		
desc. node	-495 Jun 08 j 12:47	17°♑30'02						
	-495 Jul 03 j 01:54	0°♉		conjunction	-490 Aug 03 j 09:22	3°♉58'21	1°09'44	
	-495 Aug 19 j 11:52	0°♊		minimum elong	-490 Aug 03 j 09:31	3°♉58'35	1°09'44	
	-495 Sep 29 j 23:18	0°♋			-490 Sep 12 j 13:42	0°♑		
	-495 Nov 08 j 04:24	0°♌		morning rise	-490 Sep 17 j 01:40	2°♑57'00		
	-495 Dec 16 j 20:57	0°♍			-490 Oct 27 j 17:12	0°♎		
	-494 Jan 25 j 04:58	0°♎			-490 Dec 10 j 13:01	0°♏		
	-494 Mar 07 j 00:05	0°♐			-489 Jan 22 j 05:13	0°♑		
evening set	-494 Mar 24 j 00:46	12°♐07'46		desc. node	-489 Jan 29 j 10:59	5°♑09'24		
asc. node	-494 Apr 08 j 20:19	23°♐11'32			-489 Mar 05 j 02:56	0°♒		
	-494 Apr 18 j 17:12	0°♑			-489 Apr 16 j 03:43	0°♓		
					-489 May 30 j 17:34	0°♈		
conjunction	-494 May 17 j 19:33	19°♑40'56	0°22'44		-489 Aug 03 j 13:41	0°♐		
minimum elong	-494 May 17 j 18:31	19°♑39'13	0°22'44	retrograde	-489 Aug 17 j 20:39	1°♐26'19		
	-494 Jun 02 j 09:09	0°♒			-489 Aug 31 j 18:48	30°♒♈		
max. Earth dist.	-494 Jun 08 j 04:52	3°♒49'24	2.61194 AU	min. Earth dist.	-489 Sep 14 j 16:51	26°♒08'16	0.45324 AU	
morning rise	-494 Jul 06 j 20:35	22°♒24'53		greatest brilliancy	-489 Sep 21 j 09:48	23°♒49'51	-2.4m	
	-494 Jul 18 j 16:52	0°♓		opposition	-489 Sep 22 j 18:27	23°♒21'32	-3°-33'-46	
	-494 Sep 04 j 07:04	0°♈		direct	-489 Oct 25 j 05:17	16°♒48'13		
	-494 Oct 23 j 04:18	0°♑		asc. node	-489 Nov 29 j 17:01	23°♒48'39		
	-494 Dec 13 j 16:51	0°♒			-489 Dec 15 j 07:31	0°♐		
	-493 Feb 14 j 03:58	0°♓			-488 Feb 11 j 08:18	0°♑		
retrograde	-493 Mar 26 j 18:49	8°♓21'08			-488 Apr 02 j 12:46	0°♒		
desc. node	-493 Apr 26 j 11:42	2°♓47'56			-488 May 21 j 21:13	0°♓		
opposition	-493 Apr 29 j 08:54	1°♓51'44	0°-9'-49		-488 Jul 08 j 21:10	0°♈		
greatest brilliancy	-493 Jan 13 j 03:55	16°♓02'46	-3.3m	evening set	-488 Jul 24 j 20:42	10°♓12'45		
	-493 May 05 j 00:07	30°♓♒		max. Earth dist.	-488 Aug 18 j 09:13	26°♓08'44	2.61497 AU	
min. Earth dist.	-493 May 07 j 19:09	29°♓05'39	0.46259 AU		-488 Aug 24 j 05:41	0°♑		
direct	-493 Jun 05 j 05:39	23°♓55'58						
	-493 Jul 06 j 06:44	0°♓		conjunction	-488 Sep 09 j 06:05	10°♓39'24	0°52'50	
	-493 Aug 31 j 08:00	0°♑		minimum elong	-488 Sep 09 j 07:21	10°♓41'32	0°52'49	
	-493 Oct 13 j 12:41	0°♒			-488 Oct 07 j 16:40	0°♓		
	-493 Nov 23 j 09:57	0°♓		morning rise	-488 Oct 26 j 08:01	12°♓58'54		
	-492 Jan 03 j 09:12	0°♈			-488 Nov 19 j 06:08	0°♓		
	-492 Feb 14 j 12:33	0°♐		desc. node	-488 Dec 16 j 09:58	19°♓47'19		
asc. node	-492 Feb 24 j 18:59	7°♐08'23			-488 Dec 30 j 04:41	0°♑		
	-492 Mar 29 j 07:41	0°♑			-487 Feb 07 j 23:32	0°♒		
evening set	-492 May 09 j 12:13	27°♑14'48			-487 Mar 19 j 07:22	0°♓		
	-492 May 13 j 17:39	0°♒			-487 Apr 28 j 03:57	0°♈		
					-487 Jun 09 j 03:10	0°♐		
conjunction	-492 Jun 27 j 04:47	28°♒38'36	0°59'14		-487 Jul 27 j 00:14	0°♑		
minimum elong	-492 Jun 27 j 03:38	28°♒36'46	0°59'14	retrograde	-487 Oct 01 j 14:34	22°♒20'22		
	-492 Jun 29 j 07:43	0°♓		asc. node	-487 Oct 16 j 15:20	20°♒42'52		
max. Earth dist.	-492 Jul 02 j 04:14	1°♓49'27	2.66704 AU	min. Earth dist.	-487 Nov 03 j 19:25	14°♒56'54	0.57784 AU	
morning rise	-492 Aug 11 j 21:34	27°♓45'57		opposition	-487 Nov 09 j 21:36	12°♒33'17	1°04'01	
	-492 Aug 15 j 09:49	0°♈		greatest brilliancy	-487 Nov 09 j 12:22	12°♒42'20	-1.7m	
	-492 Oct 01 j 10:36	0°♑		direct	-487 Dec 16 j 13:38	4°♒09'16		
	-492 Nov 17 j 05:59	0°♒			-486 Mar 06 j 17:36	0°♒		
	-491 Jan 03 j 03:26	0°♓			-486 Apr 30 j 18:14	0°♓		
	-491 Feb 20 j 04:19	0°♑			-486 Jun 19 j 18:08	0°♈		
desc. node	-491 Mar 13 j 10:50	12°♑38'14			-486 Aug 05 j 17:18	0°♑		
	-491 Apr 14 j 14:42	0°♒		evening set	-486 Sep 02 j 21:58	18°♑53'10		
retrograde	-491 Jun 10 j 16:44	16°♒37'04		max. Earth dist.	-486 Sep 18 j 16:58	29°♑45'58	2.51355 AU	
opposition	-491 Jul 10 j 22:52	11°♒35'17	-6°-34'-19		-486 Sep 19 j 01:02	0°♓		
greatest brilliancy	-491 Jul 10 j 22:27	11°♒35'34	-2.9m					
min. Earth dist.	-491 Jul 10 j 20:12	11°♒37'04	0.37493 AU	conjunction	-486 Oct 23 j 04:36	24°♓17'33	0°07'11	
direct	-491 Aug 09 j 21:39	6°♒36'19		minimum elong	-486 Oct 23 j 04:57	24°♓18'11	0°07'11	
	-491 Oct 17 j 06:28	0°♓		behind sun begin	-486 Oct 22 j 08:51	23°♓41'42		
	-491 Dec 05 j 18:31	0°♈		behind sun end	-486 Oct 24 j 01:04	24°♓54'42		
asc. node	-490 Jan 11 j 18:25	23°♒53'25			-486 Oct 31 j 00:23	0°♓		

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 42

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

desc. node	-486 Nov 03 j 08:41	2°♄27'19		retrograde	-480 Jan 17 j 05:56	8°♍26'41	
	-486 Dec 10 j 02:59	0°♊			-480 Feb 23 j 21:42	30°♋♌	
morning rise	-486 Dec 17 j 06:58	5°♊28'29		opposition	-480 Feb 24 j 11:19	29°♌46'54	4°13'54
	-485 Jan 18 j 00:20	0°♊		greatest brilliancy	-480 Feb 25 j 12:07	29°♌22'59	-1.4m
	-485 Feb 25 j 11:14	0°♋		min. Earth dist.	-480 Feb 29 j 18:09	27°♌44'49	0.62425 AU
	-485 Apr 05 j 08:47	0°♋		direct	-480 Apr 05 j 14:57	19°♌50'23	
	-485 May 15 j 16:33	0°♌			-480 May 19 j 19:59	0°♍	
	-485 Jun 27 j 16:43	0°♌		desc. node	-480 Jun 25 j 04:38	17°♍57'50	
	-485 Aug 14 j 21:04	0°♍			-480 Jul 15 j 09:54	0°♎	
asc. node	-485 Sep 03 j 15:25	10°♍38'13			-480 Aug 29 j 03:20	0°♎	
	-485 Oct 30 j 18:28	0°♎			-480 Oct 08 j 18:26	0°♏	
retrograde	-485 Nov 07 j 08:46	0°♎22'20			-480 Nov 16 j 13:30	0°♏	
	-485 Nov 14 j 18:49	30°♋♌			-480 Dec 24 j 22:29	0°♋	
min. Earth dist.	-485 Dec 15 j 02:17	21°♌25'27	0.65723 AU		-479 Feb 01 j 23:14	0°♋	
opposition	-485 Dec 17 j 12:21	20°♌27'09	3°35'04	evening set	-479 Mar 01 j 19:41	20°♋46'41	
greatest brilliancy	-485 Dec 17 j 00:58	20°♌38'34	-1.3m		-479 Mar 14 j 10:57	0°♌	
direct	-484 Jan 26 j 02:04	11°♌01'34		asc. node	-479 Apr 25 j 12:33	29°♌44'50	
	-484 Apr 01 j 18:53	0°♎			-479 Apr 25 j 21:20	0°♌	
	-484 May 28 j 08:33	0°♌					
	-484 Jul 16 j 05:13	0°♍		conjunction	-479 Apr 29 j 04:18	2°♌15'58	0°02'15
	-484 Aug 30 j 00:41	0°♍		minimum elong	-479 Apr 29 j 04:08	2°♌15'40	0°02'15
desc. node	-484 Sep 20 j 07:28	15°♍01'34		behind sun begin	-479 Apr 28 j 05:15	1°♌36'20	
	-484 Oct 10 j 21:13	0°♎		behind sun end	-479 Apr 30 j 03:01	2°♌54'58	
evening set	-484 Oct 20 j 17:24	7°♎18'21		max. Earth dist.	-479 May 28 j 05:54	21°♌57'08	2.57584 AU
max. Earth dist.	-484 Nov 17 j 23:54	28°♎45'15	2.38923 AU		-479 Jun 09 j 08:55	0°♍	
	-484 Nov 19 j 14:44	0°♏		morning rise	-479 Jun 21 j 02:21	7°♍41'49	
					-479 Jul 25 j 17:24	0°♎	
conjunction	-484 Dec 19 j 14:22	23°♏20'31	0°-52'-38		-479 Sep 11 j 18:40	0°♎	
minimum elong	-484 Dec 19 j 11:41	23°♏15'14	0°52'38		-479 Nov 01 j 02:35	0°♏	
	-484 Dec 28 j 01:38	0°♏			-479 Dec 27 j 13:04	0°♍	
	-483 Feb 04 j 03:37	0°♋		retrograde	-478 Mar 03 j 15:52	18°♍58'28	
morning rise	-483 Feb 26 j 01:48	17°♋07'49		opposition	-478 Apr 07 j 23:35	11°♍42'15	1°45'57
	-483 Mar 14 j 18:14	0°♋		greatest brilliancy	-478 Apr 08 j 20:35	11°♍23'41	-2.0m
	-483 Apr 23 j 17:39	0°♌		min. Earth dist.	-478 Apr 16 j 07:39	8°♍46'04	0.51483 AU
	-483 Jun 04 j 20:24	0°♌		desc. node	-478 May 13 j 04:19	2°♍54'04	
	-483 Jul 19 j 22:15	0°♍		direct	-478 May 16 j 20:12	2°♍48'35	
asc. node	-483 Jul 21 j 14:49	1°♍04'42			-478 Jul 30 j 07:12	0°♎	
	-483 Sep 07 j 18:13	0°♎			-478 Sep 13 j 12:28	0°♏	
	-483 Nov 13 j 17:37	0°♌			-478 Oct 24 j 06:05	0°♏	
retrograde	-483 Dec 10 j 22:59	4°♌04'57			-478 Dec 02 j 21:19	0°♋	
	-482 Jan 05 j 01:05	30°♋♌			-477 Jan 11 j 23:38	0°♌	
opposition	-482 Jan 19 j 16:31	24°♎35'59	4°35'54		-477 Feb 22 j 10:36	0°♌	
greatest brilliancy	-482 Jan 19 j 22:06	24°♎30'26	-1.2m	asc. node	-477 Mar 13 j 11:03	13°♌20'55	
min. Earth dist.	-482 Jan 21 j 03:13	24°♎01'30	0.67367 AU		-477 Apr 06 j 16:53	0°♌	
direct	-482 Mar 01 j 19:03	14°♎39'27		evening set	-477 Apr 23 j 08:15	11°♌12'48	
	-482 Apr 28 j 18:58	0°♌			-477 May 21 j 17:51	0°♍	
	-482 Jun 23 j 23:43	0°♍					
desc. node	-482 Aug 08 j 06:17	29°♍01'54		conjunction	-477 Jun 12 j 22:07	14°♍25'22	0°48'05
	-482 Aug 09 j 16:33	0°♍		minimum elong	-477 Jun 12 j 20:44	14°♍23'08	0°48'05
	-482 Sep 21 j 01:39	0°♎		max. Earth dist.	-477 Jun 23 j 19:56	21°♍27'23	2.65192 AU
	-482 Oct 30 j 20:21	0°♏			-477 Jul 07 j 03:42	0°♎	
	-482 Dec 08 j 05:16	0°♏		morning rise	-477 Jul 29 j 20:46	14°♎28'46	
evening set	-482 Dec 24 j 18:43	13°♏04'36			-477 Aug 23 j 08:10	0°♌	
	-481 Jan 15 j 05:56	0°♋			-477 Oct 09 j 21:28	0°♍	
	-481 Feb 22 j 21:24	0°♋			-477 Nov 26 j 22:13	0°♍	
					-476 Jan 15 j 11:47	0°♎	
conjunction	-481 Mar 01 j 18:20	5°♋14'16	0°-54'-2		-476 Mar 11 j 01:11	0°♏	
minimum elong	-481 Mar 01 j 21:07	5°♋19'33	0°54'03	desc. node	-476 Mar 30 j 04:06	8°♏10'15	
	-481 Apr 03 j 22:54	0°♌		retrograde	-476 May 09 j 04:38	16°♏40'50	
max. Earth dist.	-481 Apr 20 j 04:35	11°♌45'56	2.45296 AU	opposition	-476 Jun 09 j 01:06	11°♏27'14	-4°-24'-3
morning rise	-481 May 04 j 19:14	22°♌09'14		greatest brilliancy	-476 Jun 10 j 00:42	11°♏10'39	-2.7m
	-481 May 16 j 00:29	0°♌		min. Earth dist.	-476 Jun 13 j 23:53	10°♏04'09	0.39282 AU
asc. node	-481 Jun 08 j 13:09	16°♌06'07		direct	-476 Jul 11 j 05:27	5°♏36'23	
	-481 Jun 29 j 10:16	0°♍			-476 Sep 17 j 16:21	0°♏	
	-481 Aug 15 j 11:42	0°♎			-476 Nov 03 j 16:52	0°♋	
	-481 Oct 05 j 08:31	0°♌			-476 Dec 17 j 14:32	0°♋	
	-481 Dec 07 j 00:55	0°♍		asc. node	-475 Jan 28 j 09:11	28°♋30'38	

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-475 Jan 30 j 14:05	0°♄		desc. node	-471 Nov 20 j 01:14	9°♌24'05	
	-475 Mar 16 j 14:51	0°♄		morning rise	-471 Nov 24 j 23:37	13°♌03'02	
	-475 May 01 j 20:08	0°♌			-471 Dec 17 j 14:34	0°♌	
evening set	-475 Jun 03 j 08:39	20°♌46'56			-470 Jan 25 j 18:40	0°♌	
	-475 Jun 17 j 20:27	0°♌			-470 Mar 05 j 11:31	0°♌	
max. Earth dist.	-475 Jul 16 j 16:04	18°♌19'45	2.67397 AU		-470 Apr 13 j 14:45	0°♌	
					-470 May 24 j 07:04	0°♄	
conjunction	-475 Jul 20 j 03:05	20°♌31'58	1°08'49		-470 Jul 07 j 05:12	0°♄	
minimum elong	-475 Jul 20 j 02:40	20°♌31'18	1°08'49		-470 Aug 28 j 05:03	0°♌	
	-475 Aug 03 j 23:05	0°♌		asc. node	-470 Sep 20 j 06:39	9°♌50'58	
morning rise	-475 Sep 02 j 20:11	19°♌11'29		retrograde	-470 Oct 24 j 15:14	16°♌36'28	
	-475 Sep 19 j 12:30	0°♌		min. Earth dist.	-470 Nov 29 j 17:38	8°♌12'22	0.63338 AU
	-475 Nov 04 j 03:57	0°♌		opposition	-470 Dec 03 j 15:20	6°♌38'35	2°48'56
	-475 Dec 18 j 20:37	0°♌		greatest brilliancy	-470 Dec 03 j 01:05	6°♌52'51	-1.4m
	-474 Jan 31 j 20:09	0°♌			-470 Dec 22 j 20:42	30°♌	
desc. node	-474 Feb 15 j 02:57	9°♌47'57		direct	-469 Jan 11 j 06:03	27°♌32'41	
	-474 Mar 16 j 15:56	0°♌			-469 Feb 01 j 03:29	0°♌	
	-474 May 01 j 02:41	0°♌			-469 Apr 14 j 22:39	0°♌	
	-474 Jun 27 j 22:41	0°♌			-469 Jun 06 j 19:46	0°♌	
retrograde	-474 Jul 25 j 19:31	5°♌04'29			-469 Jul 24 j 17:23	0°♌	
min. Earth dist.	-474 Aug 21 j 08:18	0°♌29'38	0.40689 AU		-469 Sep 07 j 06:37	0°♌	
	-474 Aug 22 j 23:42	30°♌		evening set	-469 Oct 01 j 03:02	16°♌52'54	
greatest brilliancy	-474 Aug 26 j 15:03	28°♌53'01	-2.6m	desc. node	-469 Oct 07 j 23:37	21°♌50'17	
opposition	-474 Aug 28 j 05:55	28°♌23'08	-5°-41'-13	max. Earth dist.	-469 Oct 17 j 05:36	28°♌35'38	2.43608 AU
direct	-474 Sep 27 j 20:43	22°♌46'11			-469 Oct 19 j 03:28	0°♌	
	-474 Nov 02 j 12:18	0°♌					
asc. node	-474 Dec 16 j 09:03	20°♌35'58		conjunction	-469 Nov 25 j 11:58	28°♌05'06	0°-30'-53
	-473 Jan 02 j 06:02	0°♄		minimum elong	-469 Nov 25 j 10:04	28°♌01'28	0°30'53
	-473 Feb 21 j 19:23	0°♄			-469 Nov 27 j 23:55	0°♌	
	-473 Apr 11 j 18:15	0°♌			-468 Jan 05 j 14:13	0°♌	
	-473 May 30 j 03:52	0°♌		morning rise	-468 Jan 28 j 04:08	17°♌44'36	
evening set	-473 Jul 11 j 06:18	26°♌29'32			-468 Feb 12 j 18:42	0°♌	
	-473 Jul 16 j 18:33	0°♌			-468 Mar 22 j 10:39	0°♌	
max. Earth dist.	-473 Aug 09 j 08:36	15°♌09'15	2.64170 AU		-468 May 01 j 11:10	0°♄	
					-468 Jun 12 j 17:47	0°♄	
conjunction	-473 Aug 26 j 04:37	26°♌07'26	1°02'45		-468 Jul 28 j 11:30	0°♌	
minimum elong	-473 Aug 26 j 05:34	26°♌09'00	1°02'45	asc. node	-468 Aug 07 j 06:10	6°♌00'42	
	-473 Sep 01 j 02:05	0°♌			-468 Sep 19 j 02:56	0°♌	
morning rise	-473 Oct 10 j 20:08	26°♌38'37		retrograde	-468 Nov 27 j 10:59	21°♌19'57	
	-473 Oct 15 j 18:01	0°♌		opposition	-467 Jan 06 j 11:54	11°♌37'53	4°21'42
	-473 Nov 27 j 16:59	0°♌		greatest brilliancy	-467 Jan 06 j 09:49	11°♌39'58	-1.2m
desc. node	-472 Jan 03 j 01:50	26°♌15'45		min. Earth dist.	-467 Jan 06 j 10:07	11°♌39'40	0.67512 AU
	-472 Jan 08 j 04:10	0°♌		direct	-467 Feb 16 j 04:12	1°♌50'14	
	-472 Feb 17 j 13:26	0°♌			-467 May 11 j 23:38	0°♌	
	-472 Mar 28 j 13:07	0°♌			-467 Jul 02 j 21:39	0°♌	
	-472 May 08 j 07:20	0°♌			-467 Aug 17 j 14:39	0°♌	
	-472 Jun 21 j 05:36	0°♄		desc. node	-467 Aug 24 j 22:22	5°♌04'01	
	-472 Aug 18 j 19:38	0°♄			-467 Sep 28 j 16:44	0°♌	
retrograde	-472 Sep 15 j 09:05	4°♌53'17			-467 Nov 07 j 09:53	0°♌	
	-472 Oct 11 j 16:56	30°♌		evening set	-467 Nov 27 j 11:53	15°♌37'22	
min. Earth dist.	-472 Oct 16 j 12:15	28°♌15'57	0.53206 AU		-467 Dec 15 j 18:44	0°♌	
opposition	-472 Oct 23 j 18:48	25°♌29'31	0°-27'-32		-466 Jan 22 j 19:01	0°♌	
greatest brilliancy	-472 Oct 23 j 14:16	25°♌33'50	-2.0m				
asc. node	-472 Nov 02 j 08:22	22°♌03'48		conjunction	-466 Feb 01 j 17:52	7°♌48'26	-1°-4'-59
direct	-472 Nov 27 j 22:05	17°♌41'55		minimum elong	-466 Feb 01 j 18:44	7°♌50'07	1°05'00
	-471 Jan 17 j 02:35	0°♄			-466 Mar 02 j 09:09	0°♌	
	-471 Mar 18 j 03:47	0°♌		max. Earth dist.	-466 Mar 21 j 21:33	14°♌48'38	2.40058 AU
	-471 May 09 j 01:51	0°♌		morning rise	-466 Apr 11 j 01:57	29°♌47'49	
	-471 Jun 27 j 01:47	0°♌			-466 Apr 11 j 08:35	0°♄	
	-471 Aug 12 j 17:29	0°♌			-466 May 23 j 08:40	0°♄	
evening set	-471 Aug 17 j 17:10	3°♌17'52		asc. node	-466 Jun 25 j 05:27	22°♌19'37	
max. Earth dist.	-471 Sep 05 j 04:53	15°♌41'27	2.55839 AU		-466 Jul 06 j 21:06	0°♌	
	-471 Sep 26 j 01:35	0°♌			-466 Aug 23 j 13:50	0°♌	
					-466 Oct 16 j 00:32	0°♌	
conjunction	-471 Oct 04 j 22:19	6°♌11'16	0°28'10	retrograde	-465 Jan 02 j 01:41	24°♌52'52	
minimum elong	-471 Oct 04 j 23:27	6°♌13'14	0°28'09	opposition	-465 Feb 10 j 00:59	15°♌50'41	4°33'26
	-471 Nov 07 j 05:29	0°♌		greatest brilliancy	-465 Feb 10 j 18:58	15°♌33'04	-1.3m

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 44

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

min. Earth dist.	-465 Feb 13 j 20:19	14°02'21"	0.65154 AU		-460 Jun 24 j 16:40	0°00'	
direct	-465 Mar 23 j 09:38	5°04'17"					
	-465 Jun 06 j 04:35	0°00'		conjunction	-460 Jul 05 j 16:16	7°00'20"	1°03'54"
desc. node	-465 Jul 12 j 22:07	21°00'19"		minimum elong	-460 Jul 05 j 15:21	6°05'58"	1°03'54"
	-465 Jul 26 j 11:10	0°00'		max. Earth dist.	-460 Jul 07 j 13:20	8°05'12"	2.67175 AU
	-465 Sep 07 j 21:10	0°00'			-460 Aug 10 j 18:17	0°00'	
	-465 Oct 18 j 00:48	0°00'		morning rise	-460 Aug 19 j 21:33	5°04'49"	
	-465 Nov 25 j 13:50	0°00'			-460 Sep 26 j 14:24	0°00'	
	-464 Jan 02 j 17:48	0°00'			-460 Nov 11 j 22:15	0°00'	
evening set	-464 Feb 05 j 22:02	26°00'27"			-460 Dec 27 j 20:49	0°00'	
	-464 Feb 10 j 13:18	0°00'			-459 Feb 11 j 23:13	0°00'	
	-464 Mar 21 j 19:32	0°00'		desc. node	-459 Mar 03 j 19:20	12°00'41"	
					-459 Mar 31 j 20:08	0°00'	
conjunction	-464 Apr 08 j 08:03	12°00'37"	0°-20'-33"		-459 May 31 j 08:43	0°00'	
minimum elong	-464 Apr 08 j 09:22	12°00'40"	0°20'33"	retrograde	-459 Jun 28 j 02:48	4°00'48"	
	-464 May 03 j 00:52	0°00'		min. Earth dist.	-459 Jul 26 j 01:16	0°00'16"	0.37831 AU
asc. node	-464 May 12 j 03:13	6°00'16"			-459 Jul 27 j 01:54	30°00'00"	
max. Earth dist.	-464 May 15 j 15:14	8°00'39"	2.53245 AU	greatest brilliancy	-459 Jul 28 j 08:49	29°00'38"	-2.8m
morning rise	-464 Jun 03 j 23:58	21°00'45"		opposition	-459 Jul 29 j 04:46	29°00'25"	-6°-51'-34"
	-464 Jun 16 j 09:53	0°00'		direct	-459 Aug 27 j 19:07	24°00'27"	
	-464 Aug 01 j 21:32	0°00'			-459 Sep 27 j 04:19	0°00'	
	-464 Sep 19 j 15:42	0°00'			-459 Nov 26 j 17:08	0°00'	
	-464 Nov 11 j 07:59	0°00'		asc. node	-458 Jan 02 j 00:46	22°00'09"	
	-463 Jan 23 j 08:18	0°00'			-458 Jan 14 j 12:52	0°00'	
retrograde	-463 Feb 11 j 20:50	2°00'08"			-458 Mar 02 j 23:13	0°00'	
	-463 Mar 02 j 07:39	30°00'00"			-458 Apr 19 j 12:38	0°00'	
opposition	-463 Mar 20 j 13:25	24°00'14"	3°04'06"		-458 Jun 06 j 05:51	0°00'	
greatest brilliancy	-463 Mar 21 j 17:54	23°00'47"	-1.7m	evening set	-458 Jun 26 j 16:50	12°00'54"	
min. Earth dist.	-463 Mar 27 j 22:33	21°00'30"	0.56394 AU		-458 Jul 23 j 14:04	0°00'	
direct	-463 Apr 29 j 17:20	14°00'43"		max. Earth dist.	-458 Jul 31 j 01:15	4°00'46"	2.66060 AU
desc. node	-463 May 29 j 20:53	20°00'04"					
	-463 Jun 22 j 19:45	0°00'		conjunction	-458 Aug 11 j 15:11	12°00'13"	1°08'22"
	-463 Aug 12 j 17:02	0°00'		minimum elong	-458 Aug 11 j 15:39	12°00'14"	1°08'22"
	-463 Sep 24 j 01:54	0°00'			-458 Sep 07 j 22:33	0°00'	
	-463 Nov 02 j 16:44	0°00'		morning rise	-458 Sep 25 j 12:14	11°00'36"	
	-463 Dec 11 j 15:09	0°00'			-458 Oct 22 j 21:41	0°00'	
	-462 Jan 20 j 03:45	0°00'			-458 Dec 05 j 09:35	0°00'	
	-462 Mar 02 j 02:45	0°00'			-457 Jan 16 j 14:08	0°00'	
asc. node	-462 Mar 30 j 02:34	19°00'45"		desc. node	-457 Jan 19 j 18:08	2°00'16"	
evening set	-462 Apr 04 j 14:11	23°00'33"			-457 Feb 26 j 20:22	0°00'	
	-462 Apr 13 j 22:52	0°00'			-457 Apr 08 j 21:56	0°00'	
					-457 May 21 j 10:49	0°00'	
conjunction	-462 May 27 j 16:50	29°00'20"	0°33'08"		-457 Jul 09 j 22:04	0°00'	
minimum elong	-462 May 27 j 15:32	29°00'18"	0°33'07"	retrograde	-457 Aug 29 j 06:17	14°00'47"	
	-462 May 28 j 16:48	0°00'		min. Earth dist.	-457 Sep 27 j 05:47	9°00'00"	0.48136 AU
max. Earth dist.	-462 Jun 14 j 05:56	10°00'49"	2.62843 AU	greatest brilliancy	-457 Oct 04 j 07:04	6°00'27"	-2.2m
	-462 Jul 14 j 00:10	0°00'		opposition	-457 Oct 05 j 06:12	6°00'06"	-2°-20'-55"
morning rise	-462 Jul 15 j 11:09	0°00'55"			-457 Oct 27 j 01:46	30°00'00"	
	-462 Aug 30 j 09:38	0°00'		direct	-457 Nov 07 j 15:56	29°00'04"	
	-462 Oct 17 j 16:50	0°00'		asc. node	-457 Nov 19 j 23:42	0°00'01"	
	-462 Dec 06 j 14:16	0°00'			-457 Nov 19 j 19:04	0°00'	
	-461 Jan 30 j 13:21	0°00'			-456 Feb 03 j 13:10	0°00'	
retrograde	-461 Apr 10 j 15:45	21°00'16"			-456 Mar 27 j 18:25	0°00'	
desc. node	-461 Apr 16 j 19:27	21°00'02"			-456 May 16 j 20:49	0°00'	
opposition	-461 May 13 j 03:47	15°00'15"	-1°-34'-41"		-456 Jul 04 j 04:23	0°00'	
greatest brilliancy	-461 May 13 j 20:13	15°00'02"	-2.5m	evening set	-456 Aug 02 j 09:15	18°00'42"	
min. Earth dist.	-461 May 20 j 22:23	12°00'49"	0.43451 AU		-456 Aug 19 j 15:27	0°00'	
direct	-461 Jun 17 j 12:47	8°00'01"		max. Earth dist.	-456 Aug 24 j 12:39	3°00'13"	2.59663 AU
	-461 Aug 20 j 08:30	0°00'					
	-461 Oct 05 j 19:14	0°00'		conjunction	-456 Sep 18 j 06:29	19°00'51"	0°45'03"
	-461 Nov 16 j 22:14	0°00'		minimum elong	-456 Sep 18 j 07:49	19°00'53"	0°45'02"
	-461 Dec 28 j 14:37	0°00'			-456 Oct 03 j 01:27	0°00'	
	-460 Feb 09 j 05:41	0°00'		morning rise	-456 Nov 05 j 12:16	23°00'32"	
asc. node	-460 Feb 15 j 02:11	4°00'02"			-456 Nov 14 j 11:32	0°00'	
	-460 Mar 24 j 08:45	0°00'		desc. node	-456 Dec 06 j 17:04	16°00'14"	
	-460 May 09 j 00:01	0°00'			-456 Dec 25 j 05:01	0°00'	
evening set	-460 May 18 j 19:16	6°00'20"			-455 Feb 02 j 18:15	0°00'	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 45

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-455 Mar 13 j 19:52	0°≈		min. Earth dist.	-450 Jan 29 j 16:00	1°Ω38'26	0.66865 AU
	-455 Apr 22 j 08:29	0°✕			-450 Feb 02 j 21:01	30°℞☾	
	-455 Jun 02 j 16:23	0°Υ		direct	-450 Mar 09 j 15:46	22°☾33'08	
	-455 Jul 18 j 10:18	0°♄			-450 Apr 16 j 17:49	0°Ω	
	-455 Sep 23 j 12:54	0°♂			-450 Jun 17 j 15:13	0°♐	
asc. node	-455 Oct 06 j 22:58	1°♂44'32		desc. node	-450 Jul 29 j 13:53	26°♐10'18	
retrograde	-455 Oct 10 j 05:54	1°♂49'01			-450 Aug 04 j 07:43	0°♐	
	-455 Oct 26 j 06:20	30°℞♄			-450 Sep 16 j 00:49	0°♐	
min. Earth dist.	-455 Nov 13 j 12:39	24°♄02'46	0.60003 AU		-450 Oct 25 j 22:32	0°♄	
opposition	-455 Nov 18 j 21:01	21°♄55'35	1°47'31		-450 Dec 03 j 08:52	0°♄	
greatest brilliancy	-455 Nov 18 j 08:04	22°♄08'25	-1.6m	greatest brilliancy	-450 Dec 16 j 14:36	10°♄26'41	1.2m
direct	-455 Dec 26 j 07:29	13°♄14'54		evening set	-449 Jan 09 j 13:06	29°♄18'16	
	-454 Feb 25 j 15:40	0°♂			-449 Jan 10 j 10:21	0°≈	
	-454 Apr 24 j 21:00	0°☾			-449 Feb 18 j 02:33	0°✕	
	-454 Jun 14 j 17:23	0°Ω					
	-454 Aug 01 j 00:12	0°♐		conjunction	-449 Mar 16 j 11:51	19°✕53'38	0°-43'-11
evening set	-454 Sep 12 j 15:39	28°♐46'08		minimum elong	-449 Mar 16 j 14:32	19°✕58'38	0°43'11
	-454 Sep 14 j 10:10	0°♐			-449 Mar 30 j 04:48	0°Υ	
max. Earth dist.	-454 Sep 27 j 11:48	9°♐10'26	2.48659 AU	max. Earth dist.	-449 May 01 j 02:51	22°Υ54'14	2.48228 AU
desc. node	-454 Oct 24 j 16:56	28°♐46'41			-449 May 11 j 06:22	0°♄	
	-454 Oct 26 j 08:55	0°♐		morning rise	-449 May 16 j 19:33	3°♄50'35	
				asc. node	-449 May 29 j 20:12	12°♄45'48	
conjunction	-454 Nov 03 j 11:16	5°♐58'17	0°-6'-21		-449 Jun 24 j 14:17	0°♂	
minimum elong	-454 Nov 03 j 10:54	5°♐57'36	0°06'22		-449 Aug 10 j 08:15	0°☾	
behind sun begin	-454 Nov 02 j 13:25	5°♐17'51			-449 Sep 29 j 04:46	0°Ω	
behind sun end	-454 Nov 04 j 08:23	6°♐37'23			-449 Nov 25 j 07:54	0°♐	
	-454 Dec 05 j 09:16	0°♄		retrograde	-448 Jan 26 j 10:02	17°♐01'03	
morning rise	-454 Dec 31 j 10:00	20°♄04'19		opposition	-448 Mar 04 j 04:21	8°♐35'31	3°54'21
	-453 Jan 13 j 03:51	0°♄		greatest brilliancy	-448 Mar 05 j 07:44	8°♐09'24	-1.5m
	-453 Feb 20 j 11:49	0°≈		min. Earth dist.	-448 Mar 10 j 06:26	6°♐16'40	0.60527 AU
	-453 Mar 31 j 06:22	0°✕			-448 Mar 31 j 09:17	30°℞Ω	
	-453 May 10 j 10:06	0°Υ		direct	-448 Apr 14 j 02:46	28°Ω45'06	
	-453 Jun 22 j 00:57	0°♄			-448 Apr 28 j 09:18	0°♐	
	-453 Aug 07 j 23:23	0°♂		desc. node	-448 Jun 15 j 13:03	17°♐33'07	
asc. node	-453 Aug 24 j 21:27	9°♂44'21			-448 Jul 08 j 02:11	0°♐	
	-453 Oct 06 j 09:21	0°☾			-448 Aug 23 j 05:18	0°♐	
retrograde	-453 Nov 15 j 02:17	8°☾24'54			-448 Oct 03 j 07:39	0°♄	
	-453 Dec 21 j 15:46	30°℞♂			-448 Nov 11 j 08:16	0°♄	
min. Earth dist.	-453 Dec 23 j 16:17	29°♂11'32	0.66650 AU		-448 Dec 19 j 20:49	0°≈	
opposition	-453 Dec 25 j 06:21	28°♂33'23	3°55'47		-447 Jan 28 j 00:33	0°✕	
greatest brilliancy	-453 Dec 24 j 21:46	28°♂41'59	-1.3m		-447 Mar 09 j 15:09	0°Υ	
direct	-452 Feb 03 j 07:06	18°♂58'46		evening set	-447 Mar 14 j 17:28	3°Υ40'19	
	-452 Mar 22 j 11:54	0°☾		asc. node	-447 Apr 15 j 18:56	26°Υ17'23	
	-452 May 22 j 07:52	0°Ω			-447 Apr 21 j 03:47	0°♄	
	-452 Jul 11 j 02:16	0°♐					
	-452 Aug 25 j 05:07	0°♐		conjunction	-447 May 10 j 00:38	12°♄52'13	0°14'26
desc. node	-452 Sep 10 j 15:35	11°♐31'29		minimum elong	-447 May 09 j 23:55	12°♄51'00	0°14'25
	-452 Oct 06 j 04:03	0°♐		behind sun begin	-447 May 09 j 14:47	12°♄35'35	
evening set	-452 Nov 02 j 11:23	20°♐28'30		behind sun end	-447 May 10 j 09:03	13°♄06'25	
	-452 Nov 14 j 21:41	0°♄		max. Earth dist.	-447 Jun 03 j 19:16	29°♄24'55	2.59677 AU
	-452 Dec 23 j 07:52	0°♄			-447 Jun 04 j 16:31	0°♂	
max. Earth dist.	-452 Dec 26 j 08:46	2°♄23'39	2.37327 AU	morning rise	-447 Jun 30 j 06:09	16°♂41'57	
					-447 Jul 20 j 23:14	0°☾	
conjunction	-451 Jan 03 j 23:21	9°♄11'13	-1°-1'-7		-447 Sep 06 j 16:57	0°Ω	
minimum elong	-451 Jan 03 j 21:18	9°♄07'09	1°01'07		-447 Oct 26 j 02:34	0°♐	
	-451 Jan 30 j 08:47	0°≈			-447 Dec 18 j 05:10	0°♐	
	-451 Mar 09 j 22:18	0°✕			-446 Mar 13 j 18:44	0°♐	
morning rise	-451 Mar 14 j 16:55	3°✕39'14		retrograde	-446 Mar 16 j 06:39	0°♐02'16	
	-451 Apr 18 j 20:32	0°Υ			-446 Mar 18 j 18:09	30°℞♐	
	-451 May 30 j 20:33	0°♄		opposition	-446 Apr 19 j 15:58	23°♐10'55	0°44'41
asc. node	-451 Jul 11 j 20:27	28°♄12'26		greatest brilliancy	-446 Apr 20 j 02:02	23°♐02'21	-2.2m
	-451 Jul 14 j 14:54	0°♂		min. Earth dist.	-446 Apr 28 j 04:45	20°♐16'41	0.48613 AU
	-451 Sep 01 j 09:13	0°☾		desc. node	-446 May 03 j 12:04	18°♐36'00	
	-451 Oct 30 j 04:39	0°Ω		direct	-446 May 27 j 13:18	14°♐46'02	
retrograde	-451 Dec 18 j 20:20	11°Ω53'15			-446 Jul 18 j 17:34	0°♐	
opposition	-450 Jan 27 j 09:00	2°Ω32'49	4°38'35		-446 Sep 05 j 23:16	0°♄	
greatest brilliancy	-450 Jan 27 j 19:04	2°Ω22'52	-1.2m		-446 Oct 17 j 20:41	0°♄	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 46

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-446 Nov 27 j 02:19	0°♊	morning rise	-441 Oct 20 j 01:22	6°♊11'14	
	-445 Jan 06 j 14:12	0°♋		-441 Nov 22 j 20:43	0°♌	
	-445 Feb 17 j 08:34	0°♌	desc. node	-441 Dec 24 j 10:22	22°♌54'13	
asc. node	-445 Mar 03 j 17:39	10°♌03'32		-440 Jan 03 j 01:14	0°♍	
	-445 Apr 01 j 20:18	0°♎		-440 Feb 12 j 02:28	0°♏	
evening set	-445 May 03 j 07:18	20°♎59'11		-440 Mar 22 j 16:25	0°♐	
	-445 May 17 j 01:08	0°♑		-440 May 01 j 20:04	0°♋	
				-440 Jun 13 j 09:19	0°♌	
conjunction	-445 Jun 21 j 18:20	23°♑06'31 0°55'02		-440 Aug 02 j 15:15	0°♍	
minimum elong	-445 Jun 21 j 17:03	23°♑04'27 0°55'02	retrograde	-440 Sep 24 j 20:29	15°♍33'54	
max. Earth dist.	-445 Jun 29 j 07:26	27°♑56'48 2.66129 AU	asc. node	-440 Oct 23 j 13:39	9°♍51'01	
	-445 Jul 02 j 12:27	0°♒	min. Earth dist.	-440 Oct 27 j 03:22	8°♍30'52 0.55822 AU	
morning rise	-445 Aug 06 j 22:59	22°♒34'58	opposition	-440 Nov 02 j 19:42	5°♍55'16 0°28'08	
	-445 Aug 18 j 15:09	0°♓	greatest brilliancy	-440 Nov 02 j 15:03	5°♍59'46 -1.8m	
	-445 Oct 04 j 21:00	0°♐		-440 Nov 20 j 15:10	30°♐♑	
	-445 Nov 21 j 03:49	0°♑	direct	-440 Dec 08 j 20:38	27°♑46'25	
	-444 Jan 08 j 00:46	0°♌		-440 Dec 28 j 09:35	0°♍	
	-444 Feb 27 j 07:52	0°♍		-439 Mar 11 j 01:37	0°♑	
desc. node	-444 Mar 20 j 10:43	11°♍59'01		-439 May 03 j 14:53	0°♒	
	-444 May 02 j 22:33	0°♏		-439 Jun 22 j 04:41	0°♓	
retrograde	-444 May 27 j 11:51	3°♏32'04		-439 Aug 08 j 01:42	0°♐	
	-444 Jun 21 j 02:29	30°♐♑	evening set	-439 Aug 26 j 19:54	12°♐28'58	
opposition	-444 Jun 26 j 16:39	28°♐32'15 -5°-49'-43	max. Earth dist.	-439 Sep 12 j 14:24	23°♐53'15 2.53439 AU	
greatest brilliancy	-444 Jun 27 j 06:28	28°♐23'01 -2.8m		-439 Sep 21 j 10:43	0°♑	
min. Earth dist.	-444 Jun 29 j 01:19	27°♐54'25 0.37933 AU				
direct	-444 Jul 27 j 09:37	23°♐17'19	conjunction	-439 Oct 15 j 01:38	16°♑38'49 0°16'34	
	-444 Aug 29 j 10:37	0°♏	minimum elong	-439 Oct 15 j 02:23	16°♑40'10 0°16'32	
	-444 Oct 25 j 07:02	0°♐		-439 Nov 02 j 13:15	0°♌	
	-444 Dec 10 j 14:06	0°♋	desc. node	-439 Nov 10 j 08:55	5°♌44'01	
asc. node	-443 Jan 18 j 16:49	26°♋01'03	morning rise	-439 Dec 07 j 04:31	25°♌44'32	
	-443 Jan 24 j 16:55	0°♌		-439 Dec 12 j 19:26	0°♍	
	-443 Mar 11 j 09:01	0°♎		-438 Jan 20 j 20:13	0°♏	
	-443 Apr 26 j 23:28	0°♑		-438 Feb 28 j 09:37	0°♐	
evening set	-443 Jun 11 j 23:00	29°♑13'02		-438 Apr 08 j 08:45	0°♋	
	-443 Jun 13 j 04:39	0°♒		-438 May 18 j 18:32	0°♌	
max. Earth dist.	-443 Jul 21 j 23:08	24°♒37'52 2.67158 AU		-438 Jul 01 j 00:23	0°♍	
				-438 Aug 19 j 06:13	0°♑	
conjunction	-443 Jul 28 j 07:15	28°♒40'39 1°09'49	asc. node	-438 Sep 10 j 13:28	11°♑13'17	
minimum elong	-443 Jul 28 j 07:09	28°♒40'30 1°09'50	retrograde	-438 Nov 01 j 13:59	25°♑03'07	
	-443 Jul 30 j 08:54	0°♓	min. Earth dist.	-438 Dec 08 j 14:54	16°♑20'20 0.64778 AU	
morning rise	-443 Sep 10 j 22:37	27°♓27'10	opposition	-438 Dec 11 j 16:56	15°♑06'07 3°17'37	
	-443 Sep 14 j 20:24	0°♐	greatest brilliancy	-438 Dec 11 j 03:49	15°♑19'16 -1.4m	
	-443 Oct 30 j 05:25	0°♑	direct	-437 Jan 19 j 21:19	5°♑48'37	
	-443 Dec 13 j 10:25	0°♌		-437 Apr 07 j 10:51	0°♒	
	-442 Jan 25 j 15:15	0°♍		-437 Jun 01 j 07:23	0°♓	
desc. node	-442 Feb 05 j 11:05	7°♍35'51		-437 Jul 19 j 19:13	0°♐	
	-442 Mar 09 j 06:15	0°♏		-437 Sep 02 j 13:14	0°♑	
	-442 Apr 21 j 09:06	0°♐	desc. node	-437 Sep 28 j 07:29	18°♑13'47	
	-442 Jun 07 j 17:03	0°♋	evening set	-437 Oct 12 j 11:49	28°♑32'56	
retrograde	-442 Aug 08 j 08:58	20°♋59'02		-437 Oct 14 j 11:10	0°♌	
min. Earth dist.	-442 Sep 04 j 11:31	16°♋02'19 0.43131 AU	max. Earth dist.	-437 Nov 01 j 16:55	13°♌35'01 2.40881 AU	
greatest brilliancy	-442 Sep 10 j 16:45	13°♋59'59 -2.5m		-437 Nov 23 j 06:41	0°♍	
opposition	-442 Sep 12 j 06:18	13°♋28'53 -4°-30'-41				
direct	-442 Oct 13 j 21:28	7°♋20'37	conjunction	-437 Dec 09 j 06:28	12°♍21'57 0°-43'-59	
asc. node	-442 Dec 06 j 15:26	21°♋53'52	minimum elong	-437 Dec 09 j 03:54	12°♍16'59 0°44'00	
	-442 Dec 23 j 09:47	0°♌		-437 Dec 31 j 19:28	0°♏	
	-441 Feb 15 j 07:02	0°♎		-436 Feb 07 j 22:27	0°♐	
	-441 Apr 06 j 09:15	0°♑	morning rise	-436 Feb 13 j 22:14	4°♑41'57	
	-441 May 25 j 07:02	0°♒		-436 Mar 17 j 12:55	0°♋	
	-441 Jul 12 j 03:10	0°♓		-436 Apr 26 j 11:40	0°♌	
evening set	-441 Jul 19 j 14:30	4°♓45'48		-436 Jun 07 j 14:14	0°♍	
max. Earth dist.	-441 Aug 15 j 02:41	21°♓52'30 2.62795 AU		-436 Jul 22 j 19:48	0°♑	
	-441 Aug 27 j 12:07	0°♐	asc. node	-436 Jul 28 j 13:07	3°♑36'19	
				-436 Sep 11 j 11:15	0°♒	
conjunction	-441 Sep 03 j 17:06	4°♐46'02 0°57'31	retrograde	-436 Dec 05 j 04:16	29°♑07'01	
minimum elong	-441 Sep 03 j 18:16	4°♐47'58 0°57'31	opposition	-435 Jan 14 j 02:04	19°♑31'50 4°31'18	
	-441 Oct 11 j 02:08	0°♑	greatest brilliancy	-435 Jan 14 j 04:09	19°♑29'46 -1.2m	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 47

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

min. Earth dist.	-435 Jan 14 j 20:36	19°☿13'23	0.67560 AU		-430 Feb 25 j 04:04	0°♊	
direct	-435 Feb 24 j 01:04	9°☿38'46		asc. node	-430 Mar 20 j 09:39	16°♊22'14	
	-435 May 04 j 00:51	0°♊			-430 Apr 09 j 04:24	0°♋	
	-435 Jun 27 j 05:05	0°♌		evening set	-430 Apr 15 j 11:52	4°♋17'36	
	-435 Aug 12 j 12:40	0°♍			-430 May 24 j 01:01	0°♎	
desc. node	-435 Aug 15 j 06:23	1°♍52'19					
	-435 Sep 23 j 20:05	0°♎		conjunction	-430 Jun 06 j 02:42	8°♎32'46	0°42'15
	-435 Nov 02 j 14:52	0°♏		minimum elong	-430 Jun 06 j 01:18	8°♎30'30	0°42'14
	-435 Dec 11 j 00:03	0°♐		max. Earth dist.	-430 Jun 19 j 23:23	17°♎32'04	2.64248 AU
evening set	-435 Dec 12 j 15:45	1°♐18'18			-430 Jul 09 j 08:46	0°☿	
	-434 Jan 18 j 00:16	0°♑		morning rise	-430 Jul 23 j 19:03	9°☿12'26	
					-430 Aug 25 j 14:51	0°♊	
conjunction	-434 Feb 17 j 18:30	23°♑59'04	-1°00'-18		-430 Oct 12 j 11:00	0°♌	
minimum elong	-434 Feb 17 j 20:47	24°♑03'30	1°00'18		-430 Nov 30 j 04:25	0°♍	
	-434 Feb 25 j 14:15	0°♌			-429 Jan 20 j 12:19	0°♎	
	-434 Apr 06 j 13:38	0°♊			-429 Mar 26 j 03:33	0°♏	
max. Earth dist.	-434 Apr 09 j 19:51	2°♊23'09	2.42888 AU	desc. node	-429 Apr 07 j 04:01	3°♏13'22	
morning rise	-434 Apr 24 j 22:31	13°♊19'36		retrograde	-429 Apr 26 j 17:01	5°♏27'11	
	-434 May 18 j 13:02	0°♋			-429 May 27 j 22:42	30°♎	
asc. node	-434 Jun 15 j 11:23	19°♋05'01		opposition	-429 May 28 j 06:33	29°♎54'12	-3°-9'-31
	-434 Jul 01 j 22:07	0°♎		greatest brilliancy	-429 May 29 j 06:54	29°♎36'11	-2.6m
	-434 Aug 18 j 03:28	0°☿		min. Earth dist.	-429 Jun 03 j 19:17	27°♎58'58	0.40931 AU
	-434 Oct 08 j 19:33	0°♊		direct	-429 Jun 30 j 21:11	23°♎26'46	
	-434 Dec 18 j 04:28	0°♌			-429 Aug 02 j 02:02	0°♏	
retrograde	-433 Jan 10 j 14:44	3°♌01'43			-429 Sep 26 j 13:30	0°♐	
	-433 Feb 01 j 09:43	30°♌			-429 Nov 09 j 18:18	0°♑	
opposition	-433 Feb 18 j 05:16	24°♌11'24	4°23'42		-429 Dec 22 j 11:25	0°♒	
greatest brilliancy	-433 Feb 19 j 03:12	23°♌50'07	-1.4m		-428 Feb 03 j 17:48	0°♊	
min. Earth dist.	-433 Feb 22 j 20:45	22°♌23'22	0.63763 AU	asc. node	-428 Feb 05 j 07:36	1°♊04'35	
direct	-433 Mar 31 j 12:37	14°♌11'52			-428 Mar 19 j 07:10	0°♋	
	-433 May 27 j 22:21	0°♌			-428 May 04 j 05:07	0°♎	
desc. node	-433 Jul 03 j 04:56	19°♌29'33		evening set	-428 May 27 j 19:52	15°♎10'20	
	-433 Jul 20 j 06:01	0°♍			-428 Jun 20 j 01:21	0°☿	
	-433 Sep 02 j 10:11	0°♎		max. Earth dist.	-428 Jul 12 j 20:30	14°☿30'56	2.67410 AU
	-433 Oct 12 j 20:47	0°♏					
	-433 Nov 20 j 13:26	0°♐		conjunction	-428 Jul 14 j 00:15	15°☿15'07	1°07'14
	-433 Dec 28 j 19:53	0°♑		minimum elong	-428 Jul 13 j 23:36	15°☿14'05	1°07'14
	-432 Feb 05 j 17:20	0°♒			-428 Aug 06 j 03:28	0°♊	
evening set	-432 Feb 20 j 07:39	11°♒00'19		morning rise	-428 Aug 27 j 21:09	13°♊55'02	
	-432 Mar 17 j 01:22	0°♊			-428 Sep 21 j 19:54	0°♌	
					-428 Nov 06 j 18:32	0°♍	
conjunction	-432 Apr 20 j 11:26	24°♊32'03	0°-7'-20		-428 Dec 21 j 23:43	0°♎	
minimum elong	-432 Apr 20 j 11:51	24°♊32'48	0°07'19		-427 Feb 04 j 18:38	0°♏	
behind sun begin	-432 Apr 19 j 14:25	23°♊55'22		desc. node	-427 Feb 22 j 03:10	11°♏36'15	
behind sun end	-432 Apr 21 j 09:18	25°♊10'13			-427 Mar 21 j 23:05	0°♐	
	-432 Apr 28 j 08:01	0°♋			-427 May 09 j 13:39	0°♑	
asc. node	-432 May 02 j 10:41	2°♋50'24		retrograde	-427 Jul 14 j 08:51	22°♑38'32	
max. Earth dist.	-432 May 23 j 03:27	16°♋56'40	2.55726 AU	min. Earth dist.	-427 Aug 10 j 01:13	18°♑12'19	0.39098 AU
	-432 Jun 11 j 17:00	0°♎		greatest brilliancy	-427 Aug 14 j 05:01	17°♑00'31	-2.8m
morning rise	-432 Jun 13 j 23:01	1°♎29'09		opposition	-427 Aug 15 j 14:47	16°♑36'06	-6°-24'-14
	-432 Jul 28 j 01:22	0°☿		direct	-427 Sep 14 j 13:17	11°♑21'06	
	-432 Sep 14 j 08:09	0°♊			-427 Nov 14 j 20:29	0°♌	
	-432 Nov 04 j 11:08	0°♌		asc. node	-427 Dec 23 j 06:56	21°♌09'11	
	-431 Jan 03 j 14:16	0°♍			-426 Jan 07 j 04:24	0°♎	
retrograde	-431 Feb 22 j 18:45	11°♍55'41			-426 Feb 25 j 02:58	0°♏	
opposition	-431 Mar 30 j 18:05	4°♍21'19	2°22'51		-426 Apr 14 j 09:18	0°♐	
greatest brilliancy	-431 Mar 31 j 19:38	3°♍58'12	-1.9m		-426 Jun 01 j 11:07	0°♑	
min. Earth dist.	-431 Apr 07 j 17:58	1°♍28'25	0.53741 AU	evening set	-426 Jul 05 j 01:42	21°☿09'49	
	-431 Apr 12 j 01:28	30°♌			-426 Jul 18 j 23:16	0°♊	
direct	-431 May 09 j 07:11	25°♌08'56		max. Earth dist.	-426 Aug 05 j 12:05	11°♊14'33	2.65123 AU
desc. node	-431 May 20 j 04:15	25°♌55'22					
	-431 Jun 06 j 13:08	0°♍		conjunction	-426 Aug 19 j 22:21	20°♊35'05	1°05'36
	-431 Aug 04 j 23:24	0°♎		minimum elong	-426 Aug 19 j 23:06	20°♊36'19	1°05'37
	-431 Sep 17 j 17:39	0°♏			-426 Sep 03 j 07:52	0°♌	
	-431 Oct 27 j 22:04	0°♐		morning rise	-426 Oct 04 j 03:42	20°♌30'44	
	-431 Dec 06 j 04:53	0°♑			-426 Oct 18 j 03:41	0°♒	
	-430 Jan 14 j 23:47	0°♒			-426 Nov 30 j 08:58	0°♋	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 48

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

desc. node	-425 Jan 10 j 02:06	29° \mathbb{M} 12'55			-420 Jan 20 j 02:56	30° $\mathbb{R}\mathbb{I}$	
	-425 Jan 11 j 03:58	0° \mathbb{X}		direct	-420 Feb 11 j 08:02	26° \mathbb{I} 50'06	
	-425 Feb 20 j 22:01	0° \mathbb{Z}			-420 Mar 06 j 09:07	0° \mathbb{S}	
	-425 Apr 02 j 07:33	0° \approx			-420 May 15 j 19:23	0° \mathbb{Q}	
	-425 May 13 j 15:31	0° \mathbb{H}			-420 Jul 05 j 18:52	0° \mathbb{M}	
	-425 Jun 28 j 01:19	0° \mathbb{Y}			-420 Aug 20 j 06:53	0° \mathbb{L}	
retrograde	-425 Sep 08 j 20:04	27° \mathbb{Y} 01'22		desc. node	-420 Aug 31 j 22:30	8° \mathbb{L} 06'01	
min. Earth dist.	-425 Oct 09 j 00:00	20° \mathbb{Y} 46'52	0.50974 AU		-420 Oct 01 j 08:53	0° \mathbb{M}	
opposition	-425 Oct 16 j 17:01	17° \mathbb{Y} 54'14	-1°-13'-10		-420 Nov 10 j 03:03	0° \mathbb{X}	
greatest brilliancy	-425 Oct 16 j 04:46	18° \mathbb{Y} 05'40	-2.1m	evening set	-420 Nov 16 j 06:26	4° \mathbb{X} 44'48	
asc. node	-425 Nov 10 j 06:40	11° \mathbb{Y} 04'51			-420 Dec 18 j 12:50	0° \mathbb{Z}	
direct	-425 Nov 20 j 02:24	10° \mathbb{Y} 25'48					
	-424 Jan 25 j 04:40	0° \mathbb{X}		conjunction	-419 Jan 20 j 02:43	25° \mathbb{Z} 42'54	-1°-5'-14
	-424 Mar 21 j 14:48	0° \mathbb{I}		minimum elong	-419 Jan 20 j 02:10	25° \mathbb{Z} 41'48	1°05'15
	-424 May 11 j 16:31	0° \mathbb{S}			-419 Jan 25 j 13:22	0° \approx	
	-424 Jun 29 j 09:46	0° \mathbb{Q}		max. Earth dist.	-419 Feb 26 j 20:38	25° \approx 11'33	2.38114 AU
evening set	-424 Aug 11 j 01:50	27° \mathbb{Q} 24'28			-419 Mar 05 j 02:36	0° \mathbb{H}	
	-424 Aug 15 j 00:27	0° \mathbb{M}		morning rise	-419 Mar 30 j 14:00	19° \mathbb{H} 18'03	
max. Earth dist.	-424 Aug 31 j 01:10	10° \mathbb{M} 39'25	2.57647 AU		-419 Apr 14 j 00:23	0° \mathbb{Y}	
					-419 May 25 j 22:59	0° \mathbb{X}	
conjunction	-424 Sep 27 j 14:26	29° \mathbb{M} 25'14	0°35'50	asc. node	-419 Jul 02 j 04:02	25° \mathbb{X} 12'06	
minimum elong	-424 Sep 27 j 15:42	29° \mathbb{M} 27'25	0°35'49		-419 Jul 09 j 11:47	0° \mathbb{I}	
	-424 Sep 28 j 10:32	0° \mathbb{L}			-419 Aug 26 j 11:51	0° \mathbb{S}	
	-424 Nov 09 j 18:15	0° \mathbb{M}			-419 Oct 20 j 11:46	0° \mathbb{Q}	
morning rise	-424 Nov 16 j 06:10	4° \mathbb{M} 43'39		retrograde	-419 Dec 26 j 21:19	19° \mathbb{Q} 44'02	
desc. node	-424 Nov 27 j 01:18	12° \mathbb{M} 39'13		opposition	-418 Feb 04 j 03:41	10° \mathbb{Q} 33'12	4°36'55
	-424 Dec 20 j 07:43	0° \mathbb{X}		greatest brilliancy	-418 Feb 04 j 18:12	10° \mathbb{Q} 18'55	-1.3m
	-423 Jan 28 j 16:03	0° \mathbb{Z}		min. Earth dist.	-418 Feb 07 j 07:12	9° \mathbb{Q} 19'00	0.66051 AU
	-423 Mar 08 j 12:31	0° \approx		direct	-418 Mar 17 j 12:45	0° \mathbb{Q} 31'48	
	-423 Apr 16 j 18:43	0° \mathbb{H}			-418 Jun 10 j 15:41	0° \mathbb{M}	
	-423 May 27 j 15:23	0° \mathbb{Y}		desc. node	-418 Jul 19 j 22:20	23° \mathbb{M} 35'42	
	-423 Jul 11 j 01:57	0° \mathbb{X}			-418 Jul 29 j 18:02	0° \mathbb{L}	
	-423 Sep 04 j 01:06	0° \mathbb{I}			-418 Sep 10 j 21:33	0° \mathbb{M}	
asc. node	-423 Sep 27 j 05:12	8° \mathbb{I} 01'47			-418 Oct 20 j 23:10	0° \mathbb{X}	
retrograde	-423 Oct 18 j 14:31	10° \mathbb{I} 52'59			-418 Nov 28 j 11:04	0° \mathbb{Z}	
min. Earth dist.	-423 Nov 22 j 22:12	2° \mathbb{I} 45'05	0.61963 AU		-417 Jan 05 j 13:37	0° \approx	
opposition	-423 Nov 27 j 11:29	0° \mathbb{I} 56'09	2°25'20	evening set	-417 Jan 25 j 05:35	15° \approx 20'32	
greatest brilliancy	-423 Nov 26 j 21:03	1° \mathbb{I} 10'33	-1.5m		-417 Feb 13 j 06:48	0° \mathbb{H}	
	-423 Nov 29 j 20:09	30° $\mathbb{R}\mathbb{X}$			-417 Mar 25 j 10:04	0° \mathbb{Y}	
direct	-422 Jan 04 j 14:35	22° \mathbb{X} 00'37					
	-422 Feb 13 j 09:59	0° \mathbb{I}		conjunction	-417 Mar 30 j 09:44	3° \mathbb{Y} 37'56	0°-30'-28
	-422 Apr 18 j 12:35	0° \mathbb{S}		minimum elong	-417 Mar 30 j 11:44	3° \mathbb{Y} 41'34	0°30'28
	-422 Jun 09 j 12:13	0° \mathbb{Q}			-417 May 06 j 12:29	0° \mathbb{X}	
	-422 Jul 27 j 04:32	0° \mathbb{M}		max. Earth dist.	-417 May 10 j 10:12	2° \mathbb{X} 42'25	2.51087 AU
	-422 Sep 09 j 17:38	0° \mathbb{L}		asc. node	-417 May 20 j 01:48	9° \mathbb{X} 20'36	
evening set	-422 Sep 22 j 22:35	9° \mathbb{L} 15'42		morning rise	-417 May 28 j 01:02	14° \mathbb{X} 45'58	
max. Earth dist.	-422 Oct 07 j 19:05	19° \mathbb{L} 52'51	2.45884 AU		-417 Jun 19 j 19:30	0° \mathbb{I}	
desc. node	-422 Oct 14 j 23:50	25° \mathbb{L} 06'00			-417 Aug 05 j 08:18	0° \mathbb{S}	
	-422 Oct 21 j 16:39	0° \mathbb{M}			-417 Sep 23 j 11:02	0° \mathbb{Q}	
					-417 Nov 16 j 12:47	0° \mathbb{M}	
conjunction	-422 Nov 15 j 13:59	18° \mathbb{M} 32'28	0°-20'-22	retrograde	-416 Feb 05 j 02:16	25° \mathbb{M} 55'03	
minimum elong	-422 Nov 15 j 12:45	18° \mathbb{M} 30'10	0°20'22	opposition	-416 Mar 13 j 07:35	17° \mathbb{M} 45'41	3°27'54
	-422 Nov 30 j 15:42	0° \mathbb{X}		greatest brilliancy	-416 Mar 14 j 12:12	17° \mathbb{M} 18'50	-1.6m
	-421 Jan 08 j 08:17	0° \mathbb{Z}		min. Earth dist.	-416 Mar 20 j 04:00	15° \mathbb{M} 11'48	0.58355 AU
morning rise	-421 Jan 15 j 15:18	5° \mathbb{Z} 42'46		direct	-416 Apr 22 j 21:46	8° \mathbb{M} 04'44	
greatest brilliancy	-421 Feb 08 j 22:08	24° \mathbb{Z} 46'21	1.2m	desc. node	-416 Jun 05 j 21:17	18° \mathbb{M} 32'12	
	-421 Feb 15 j 14:15	0° \approx			-416 Jun 29 j 11:53	0° \mathbb{L}	
	-421 Mar 26 j 06:37	0° \mathbb{H}			-416 Aug 16 j 21:27	0° \mathbb{M}	
	-421 May 05 j 07:08	0° \mathbb{Y}			-416 Sep 27 j 16:13	0° \mathbb{X}	
	-421 Jun 16 j 15:08	0° \mathbb{X}			-416 Nov 06 j 00:14	0° \mathbb{Z}	
	-421 Aug 01 j 16:34	0° \mathbb{I}			-416 Dec 14 j 17:35	0° \approx	
asc. node	-421 Aug 15 j 04:26	8° \mathbb{I} 07'14			-415 Jan 23 j 01:03	0° \mathbb{H}	
	-421 Sep 25 j 02:56	0° \mathbb{S}			-415 Mar 04 j 18:48	0° \mathbb{Y}	
retrograde	-421 Nov 22 j 18:28	16° \mathbb{S} 19'11		evening set	-415 Mar 26 j 21:08	15° \mathbb{Y} 43'23	
opposition	-420 Jan 01 j 21:45	6° \mathbb{S} 32'32	4°12'21	asc. node	-415 Apr 06 j 00:53	22° \mathbb{Y} 49'16	
min. Earth dist.	-420 Jan 01 j 04:02	6° \mathbb{S} 50'16	0.67250 AU		-415 Apr 16 j 10:10	0° \mathbb{X}	
greatest brilliancy	-420 Jan 01 j 16:37	6° \mathbb{S} 37'40	-1.2m				

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 49

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

conjunction	-415 May 20 j 07:47	22°♄55'03	0°25'41		-410 Jul 23 j 01:06	0°♄	
minimum elong	-415 May 20 j 06:40	22°♄53'11	0°25'40	retrograde	-410 Aug 20 j 14:09	5°♄23'27	
	-415 May 31 j 00:24	0°♄			-410 Sep 17 j 16:40	30°♄	
max. Earth dist.	-415 Jun 10 j 01:50	6°♄36'24	2.61531 AU	min. Earth dist.	-410 Sep 17 j 16:08	0°♄00'26	0.45831 AU
morning rise	-415 Jul 09 j 02:13	25°♄24'10		greatest brilliancy	-410 Sep 24 j 11:42	27°♄38'09	-2.3m
	-415 Jul 16 j 06:28	0°♄		opposition	-410 Sep 25 j 18:24	27°♄11'19	-3°-15'-49
	-415 Sep 01 j 18:34	0°♄		direct	-410 Oct 28 j 08:17	20°♄32'39	
	-415 Oct 20 j 11:23	0°♄		asc. node	-410 Nov 26 j 21:47	25°♄33'01	
	-415 Dec 10 j 11:30	0°♄			-410 Dec 09 j 12:59	0°♄	
	-414 Feb 08 j 00:09	0°♄			-409 Feb 08 j 02:44	0°♄	
retrograde	-414 Mar 30 j 02:20	12°♄02'18			-409 Mar 31 j 18:34	0°♄	
desc. node	-414 Apr 23 j 19:36	8°♄17'56			-409 May 20 j 07:43	0°♄	
opposition	-414 May 02 j 10:33	5°♄38'14	0°-29'-40		-409 Jul 07 j 10:39	0°♄	
greatest brilliancy	-414 May 02 j 16:33	5°♄33'20	-2.3m	evening set	-409 Jul 28 j 01:00	13°♄09'31	
min. Earth dist.	-414 May 10 j 17:48	2°♄55'38	0.45710 AU	max. Earth dist.	-409 Aug 21 j 01:07	28°♄47'01	2.61149 AU
	-414 May 21 j 03:57	30°♄			-409 Aug 22 j 21:27	0°♄	
direct	-414 Jun 08 j 00:48	27°♄49'42					
	-414 Jun 26 j 00:40	0°♄		conjunction	-409 Sep 12 j 12:11	13°♄43'20	0°50'49
	-414 Aug 27 j 23:09	0°♄		minimum elong	-409 Sep 12 j 13:29	13°♄45'31	0°50'49
	-414 Oct 10 j 20:12	0°♄			-409 Oct 06 j 10:11	0°♄	
	-414 Nov 20 j 23:08	0°♄		morning rise	-409 Oct 29 j 19:12	16°♄17'54	
	-413 Jan 01 j 00:29	0°♄			-409 Nov 18 j 00:47	0°♄	
	-413 Feb 12 j 04:15	0°♄		desc. node	-409 Dec 14 j 17:11	19°♄25'33	
asc. node	-413 Feb 22 j 00:47	6°♄51'21			-409 Dec 28 j 23:47	0°♄	
	-413 Mar 27 j 22:54	0°♄			-408 Feb 06 j 18:25	0°♄	
evening set	-413 May 12 j 21:06	0°♄21'03			-408 Mar 17 j 01:08	0°♄	
	-413 May 12 j 08:10	0°♄			-408 Apr 25 j 18:57	0°♄	
	-413 Jun 27 j 21:41	0°♄			-408 Jun 06 j 11:37	0°♄	
					-408 Jul 23 j 10:57	0°♄	
conjunction	-413 Jun 30 j 09:24	1°♄35'25	1°00'39	retrograde	-408 Oct 03 j 19:49	25°♄30'10	
minimum elong	-413 Jun 30 j 08:18	1°♄33'40	1°00'39	asc. node	-408 Oct 13 j 21:23	24°♄46'50	
max. Earth dist.	-413 Jul 04 j 17:37	4°♄21'49	2.66809 AU	min. Earth dist.	-408 Nov 06 j 05:28	18°♄02'42	0.58227 AU
	-413 Aug 13 j 23:28	0°♄		opposition	-408 Nov 12 j 04:40	15°♄42'00	1°16'33
morning rise	-413 Aug 14 j 23:36	0°♄38'25		greatest brilliancy	-408 Nov 11 j 18:04	15°♄52'24	-1.7m
	-413 Sep 29 j 23:37	0°♄		direct	-408 Dec 19 j 01:19	7°♄14'33	
	-413 Nov 15 j 17:01	0°♄			-407 Mar 02 j 23:36	0°♄	
	-412 Jan 01 j 09:30	0°♄			-407 Apr 27 j 21:53	0°♄	
	-412 Feb 17 j 22:09	0°♄			-407 Jun 17 j 05:14	0°♄	
desc. node	-412 Mar 10 j 19:18	13°♄16'01			-407 Aug 03 j 08:46	0°♄	
	-412 Apr 09 j 11:38	0°♄		evening set	-407 Sep 05 j 05:59	22°♄01'32	
retrograde	-412 Jun 14 j 13:51	21°♄23'19			-407 Sep 16 j 19:35	0°♄	
opposition	-412 Jul 14 j 23:51	16°♄19'03	-6°-42'-32	max. Earth dist.	-407 Sep 20 j 14:44	2°♄38'40	2.50849 AU
min. Earth dist.	-412 Jul 14 j 06:16	16°♄30'46	0.37467 AU				
greatest brilliancy	-412 Jul 14 j 19:34	16°♄21'54	-2.9m	conjunction	-407 Oct 25 j 19:16	27°♄45'21	0°03'50
direct	-412 Aug 13 j 19:55	11°♄21'53		minimum elong	-407 Oct 25 j 19:29	27°♄45'45	0°03'49
	-412 Oct 12 j 12:13	0°♄		behind sun begin	-407 Oct 24 j 21:40	27°♄06'01	
	-412 Dec 02 j 14:27	0°♄		behind sun end	-407 Oct 26 j 17:19	28°♄25'32	
asc. node	-411 Jan 08 j 23:08	23°♄53'10			-407 Oct 28 j 21:02	0°♄	
	-411 Jan 18 j 10:11	0°♄		desc. node	-407 Oct 31 j 16:50	2°♄04'10	
	-411 Mar 05 j 22:58	0°♄			-407 Dec 08 j 00:43	0°♄	
	-411 Apr 22 j 00:41	0°♄		morning rise	-407 Dec 20 j 10:40	9°♄29'55	
	-411 Jun 08 j 11:58	0°♄			-406 Jan 15 j 22:13	0°♄	
evening set	-411 Jun 20 j 11:00	7°♄33'37			-406 Feb 23 j 08:23	0°♄	
	-411 Jul 25 j 18:31	0°♄			-406 Apr 03 j 04:14	0°♄	
max. Earth dist.	-411 Jul 27 j 07:28	0°♄59'04	2.66656 AU		-406 May 13 j 09:01	0°♄	
					-406 Jun 25 j 03:37	0°♄	
conjunction	-411 Aug 05 j 12:23	6°♄52'59	1°09'27		-406 Aug 11 j 17:40	0°♄	
minimum elong	-411 Aug 05 j 12:37	6°♄53'21	1°09'28	asc. node	-406 Aug 31 j 20:00	11°♄05'41	
	-411 Sep 10 j 04:40	0°♄			-406 Oct 16 j 22:37	0°♄	
morning rise	-411 Sep 19 j 05:29	5°♄55'39		retrograde	-406 Nov 09 j 09:20	3°♄15'04	
	-411 Oct 25 j 08:47	0°♄			-406 Dec 01 j 08:15	30°♄	
	-411 Dec 08 j 04:30	0°♄		min. Earth dist.	-406 Dec 17 j 07:46	24°♄14'39	0.65945 AU
	-410 Jan 19 j 19:34	0°♄		opposition	-406 Dec 19 j 13:38	23°♄20'39	3°41'29
desc. node	-410 Jan 26 j 18:37	4°♄57'58		greatest brilliancy	-406 Dec 19 j 02:44	23°♄31'34	-1.3m
	-410 Mar 02 j 14:41	0°♄		direct	-405 Jan 28 j 05:59	13°♄52'59	
	-410 Apr 13 j 09:38	0°♄			-405 Mar 29 j 14:59	0°♄	
	-410 May 27 j 06:59	0°♄			-405 May 26 j 12:01	0°♄	

Planetary Phenomena of Mars from -900 through -400 (UT), Astrodienst AG 7-Dez-2017 14:46, page 50

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

	-405 Jul 14 j 17:59	0°♎	conjunction	-400 May 01 j 20:55	5°♌40'41	0°05'34
	-405 Aug 28 j 18:28	0°♊	minimum elong	-400 May 01 j 20:38	5°♌40'11	0°05'34
desc. node	-405 Sep 18 j 15:46	14°♊41'23	behind sun begin	-400 Apr 30 j 22:57	5°♌03'03	
	-405 Oct 09 j 18:14	0°♎	behind sun end	-400 May 02 j 18:18	6°♌17'18	
evening set	-405 Oct 24 j 13:30	10°♎59'52	max. Earth dist.	-400 May 30 j 01:11	24°♌42'30	2.58005 AU
	-405 Nov 18 j 13:37	0°♊		-400 Jun 07 j 00:32	0°♎	
max. Earth dist.	-405 Nov 24 j 02:21	4°♊15'55	2.38533 AU	morning rise	-400 Jun 23 j 10:50	10°♎46'58
					-400 Jul 23 j 06:44	0°♌
conjunction	-405 Dec 23 j 23:04	27°♊34'09	0°-54'-57		-400 Sep 09 j 04:31	0°♎
minimum elong	-405 Dec 23 j 20:27	27°♊29'02	0°54'58		-400 Oct 29 j 04:31	0°♎
	-405 Dec 27 j 01:13	0°♌			-400 Dec 23 j 09:44	0°♊
	-404 Feb 03 j 02:49	0°♌				
morning rise	-404 Mar 01 j 20:42	21°♌40'08				
	-404 Mar 12 j 16:02	0°♎				
	-404 Apr 21 j 13:07	0°♎				
	-404 Jun 02 j 12:29	0°♌				
	-404 Jul 17 j 08:54	0°♎				
asc. node	-404 Jul 18 j 18:26	0°♎53'50				
	-404 Sep 04 j 16:30	0°♌				
	-404 Nov 06 j 15:59	0°♎				
retrograde	-404 Dec 12 j 23:16	6°♎54'04				
	-403 Jan 15 j 03:56	30°♎				
opposition	-403 Jan 21 j 17:07	27°♌26'41	4°36'50			
greatest brilliancy	-403 Jan 21 j 23:38	27°♌20'13	-1.2m			
min. Earth dist.	-403 Jan 23 j 08:13	26°♌47'54	0.67310 AU			
direct	-403 Mar 03 j 21:32	17°♌29'17				
	-403 Apr 24 j 06:15	0°♎				
	-403 Jun 21 j 03:40	0°♎				
desc. node	-403 Aug 05 j 14:06	28°♎51'25				
	-403 Aug 07 j 06:48	0°♊				
	-403 Sep 18 j 20:52	0°♎				
	-403 Oct 28 j 18:14	0°♊				
	-403 Dec 06 j 04:20	0°♌				
evening set	-403 Dec 28 j 07:05	17°♌27'25				
	-402 Jan 13 j 05:04	0°♌				
	-402 Feb 20 j 19:34	0°♎				
conjunction	-402 Mar 05 j 04:16	9°♎24'46	0°-51'-37			
minimum elong	-402 Mar 05 j 07:08	9°♎30'10	0°51'36			
	-402 Apr 01 j 19:14	0°♎				
max. Earth dist.	-402 Apr 22 j 22:52	15°♎18'58	2.45846 AU			
morning rise	-402 May 07 j 17:34	25°♎47'01				
	-402 May 13 j 18:21	0°♌				
asc. node	-402 Jun 05 j 18:17	15°♌47'18				
	-402 Jun 27 j 00:56	0°♎				
	-402 Aug 12 j 21:39	0°♌				
	-402 Oct 02 j 07:56	0°♎				
	-402 Dec 01 j 14:25	0°♎				
retrograde	-401 Jan 19 j 11:01	11°♎22'31				
opposition	-401 Feb 26 j 15:40	2°♎45'17	4°08'31			
greatest brilliancy	-401 Feb 27 j 16:57	2°♎20'59	-1.5m			
min. Earth dist.	-401 Mar 04 j 03:07	0°♎39'13	0.62096 AU			
	-401 Mar 05 j 20:42	30°♎				
direct	-401 Apr 08 j 19:44	22°♎49'34				
	-401 May 15 j 02:48	0°♎				
desc. node	-401 Jun 23 j 13:02	18°♎21'32				
	-401 Jul 13 j 12:12	0°♊				
	-401 Aug 27 j 17:36	0°♎				
	-401 Oct 07 j 13:24	0°♊				
	-401 Nov 15 j 10:24	0°♌				
	-401 Dec 23 j 19:46	0°♌				
	-400 Jan 31 j 19:53	0°♎				
evening set	-400 Mar 04 j 21:49	24°♎38'32				
	-400 Mar 12 j 06:16	0°♎				
asc. node	-400 Apr 22 j 17:22	29°♎22'45				
	-400 Apr 23 j 14:55	0°♌				

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 1

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

conjunction	-400 May 01 j 20:55	5°♄40'41	0°05'34		-395 Apr 27 j 12:13	0°≈	
minimum elong	-400 May 01 j 20:38	5°♄40'11	0°05'34		-395 Jun 19 j 16:22	0°✠	
behind sun begin	-400 Apr 30 j 22:57	5°♄03'03		retrograde	-395 Jul 29 j 02:20	9°✠37'13	
behind sun end	-400 May 02 j 18:18	6°♄17'18		min. Earth dist.	-395 Aug 24 j 17:59	4°✠58'00	0.41130 AU
max. Earth dist.	-400 May 30 j 01:11	24°♄42'30	2.58005 AU	greatest brilliancy	-395 Aug 30 j 05:18	3°✠16'11	-2.6m
	-400 Jun 07 j 00:32	0°♂		opposition	-395 Aug 31 j 20:07	2°✠45'46	-5°-25'-35
morning rise	-400 Jun 23 j 10:50	10°♂46'58			-395 Sep 10 j 06:39	30°♄≈	
	-400 Jul 23 j 06:44	0°♄		direct	-395 Oct 01 j 16:36	27°≈02'43	
	-400 Sep 09 j 04:31	0°♂			-395 Oct 23 j 14:22	0°✠	
	-400 Oct 29 j 04:31	0°♄		asc. node	-395 Dec 13 j 13:41	21°✠16'04	
	-400 Dec 23 j 09:44	0°♂			-395 Dec 29 j 16:41	0°♂	
retrograde	-399 Mar 06 j 13:42	22°♂20'29			-394 Feb 18 j 22:41	0°♄	
opposition	-399 Apr 10 j 16:36	15°♂08'48	1°30'57		-394 Apr 09 j 03:15	0°♂	
greatest brilliancy	-399 Apr 11 j 11:15	14°♂52'25	-2.0m		-394 May 27 j 15:44	0°♄	
min. Earth dist.	-399 Apr 19 j 01:56	12°♂12'20	0.50960 AU	evening set	-394 Jul 13 j 09:17	29°♄22'59	
desc. node	-399 May 10 j 12:12	6°♂52'22			-394 Jul 14 j 08:33	0°♂	
direct	-399 May 19 j 10:18	6°♂19'35		max. Earth dist.	-394 Aug 11 j 02:29	17°♂49'18	2.63942 AU
	-399 Jul 26 j 16:33	0°♄					
	-399 Sep 10 j 20:31	0°♄		conjunction	-394 Aug 28 j 07:31	29°♂03'20	1°01'25
	-399 Oct 21 j 20:56	0°♄		minimum elong	-394 Aug 28 j 08:32	29°♂04'59	1°01'26
	-399 Nov 30 j 14:38	0°≈			-394 Aug 29 j 18:00	0°♄	
	-398 Jan 09 j 17:25	0°✠		morning rise	-394 Oct 13 j 01:46	29°♄43'20	
	-398 Feb 20 j 03:47	0°♂			-394 Oct 13 j 11:32	0°♂	
asc. node	-398 Mar 10 j 15:52	13°♂00'12			-394 Nov 25 j 11:27	0°♄	
	-398 Apr 04 j 09:00	0°♄		desc. node	-394 Dec 31 j 10:38	25°♄57'44	
evening set	-398 Apr 25 j 20:23	14°♄27'19			-393 Jan 05 j 22:47	0°♄	
	-398 May 19 j 08:53	0°♂			-393 Feb 15 j 07:09	0°♄	
					-393 Mar 27 j 04:32	0°≈	
conjunction	-398 Jun 15 j 04:42	17°♂26'17	0°50'09		-393 May 06 j 17:37	0°✠	
minimum elong	-398 Jun 15 j 03:20	17°♂24'05	0°50'08		-393 Jun 19 j 02:28	0°♂	
max. Earth dist.	-398 Jun 25 j 13:01	24°♂05'57	2.65392 AU		-393 Aug 12 j 18:19	0°♄	
	-398 Jul 04 j 17:53	0°♄		retrograde	-393 Sep 18 j 19:19	8°♄21'42	
morning rise	-398 Jul 31 j 23:44	17°♄22'18		min. Earth dist.	-393 Oct 20 j 03:14	1°♄40'03	0.53728 AU
	-398 Aug 20 j 21:26	0°♂			-393 Oct 24 j 12:14	30°♄♂	
	-398 Oct 07 j 08:50	0°♄		opposition	-393 Oct 27 j 08:16	28°♂54'44	0°-11'-51
	-398 Nov 24 j 05:02	0°♂		greatest brilliancy	-393 Dec 13 j 21:09	21°♂57'09	-2.3m
	-397 Jan 12 j 07:05	0°♄		asc. node	-393 Oct 31 j 12:01	27°♂21'05	
	-397 Mar 07 j 01:16	0°♄		direct	-393 Dec 01 j 16:59	21°♂02'40	
desc. node	-397 Mar 28 j 10:35	9°♄54'45			-392 Jan 12 j 10:27	0°♄	
retrograde	-397 May 14 j 06:27	21°♄08'29			-392 Mar 14 j 23:10	0°♂	
opposition	-397 Jun 13 j 21:40	15°♄58'38	-4°-45'-43		-392 May 06 j 08:37	0°♄	
greatest brilliancy	-397 Jun 14 j 20:37	15°♄42'45	-2.8m		-392 Jun 24 j 13:47	0°♂	
min. Earth dist.	-397 Jun 18 j 10:49	14°♄43'16	0.38977 AU		-392 Aug 10 j 08:57	0°♄	
direct	-397 Jul 15 j 18:40	10°♄15'44		evening set	-392 Aug 19 j 23:11	6°♄20'35	
	-397 Sep 14 j 03:10	0°♄		max. Earth dist.	-392 Sep 07 j 00:19	18°♄28'20	2.55409 AU
	-397 Nov 01 j 14:52	0°≈			-392 Sep 23 j 19:41	0°♂	
	-397 Dec 15 j 22:32	0°✠					
asc. node	-396 Jan 26 j 14:56	28°✠20'37		conjunction	-392 Oct 07 j 08:03	9°♂26'23	0°25'14
	-396 Jan 29 j 01:52	0°♂		minimum elong	-392 Oct 07 j 09:05	9°♂28'14	0°25'13
	-396 Mar 14 j 03:59	0°♄			-392 Nov 05 j 01:32	0°♄	
	-396 Apr 29 j 09:42	0°♂		desc. node	-392 Nov 17 j 08:56	9°♄00'29	
evening set	-396 Jun 05 j 13:49	23°♂44'04		morning rise	-392 Nov 27 j 18:00	16°♄41'32	
	-396 Jun 15 j 10:20	0°♄			-392 Dec 15 j 11:49	0°♄	
max. Earth dist.	-396 Jul 18 j 03:31	20°♄48'14	2.67374 AU		-391 Jan 23 j 16:18	0°♄	
					-391 Mar 03 j 08:34	0°≈	
conjunction	-396 Jul 22 j 05:27	23°♄24'15	1°09'13		-391 Apr 11 j 09:57	0°✠	
minimum elong	-396 Jul 22 j 05:06	23°♄23'43	1°09'13		-391 May 21 j 22:23	0°♂	
	-396 Aug 01 j 13:30	0°♂			-391 Jul 04 j 12:04	0°♄	
morning rise	-396 Sep 04 j 21:54	22°♂04'12			-391 Aug 24 j 05:50	0°♂	
	-396 Sep 17 j 03:22	0°♄		asc. node	-391 Sep 17 j 11:40	11°♂02'07	
	-396 Nov 01 j 18:36	0°♂		retrograde	-391 Oct 26 j 17:21	19°♂35'10	
	-396 Dec 16 j 09:43	0°♄		min. Earth dist.	-391 Dec 02 j 00:30	11°♂07'16	0.63636 AU
	-395 Jan 29 j 05:45	0°♄		opposition	-391 Dec 05 j 18:13	9°♂37'33	2°57'46
desc. node	-395 Feb 12 j 10:55	9°♄48'11		greatest brilliancy	-391 Dec 05 j 03:57	9°♂51'49	-1.4m
	-395 Mar 13 j 18:33	0°♄		direct	-390 Jan 13 j 11:48	0°♂29'04	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 2

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-390 Apr 11 j 13:34	0°☿		max. Earth dist.	-385 May 18 j 13:09	11°♄31'23	2.53729 AU
	-390 Jun 04 j 02:49	0°♌		morning rise	-385 Jun 07 j 11:50	24°♄57'55	
	-390 Jul 22 j 07:14	0°♍			-385 Jun 15 j 01:44	0°♊	
	-390 Sep 05 j 00:35	0°♋			-385 Jul 31 j 10:31	0°☿	
evening set	-390 Oct 03 j 18:27	20°♋21'20			-385 Sep 17 j 23:37	0°♌	
desc. node	-390 Oct 05 j 07:31	21°♋28'21			-385 Nov 09 j 01:55	0°♍	
	-390 Oct 17 j 00:05	0°♎			-384 Jan 14 j 17:43	0°♋	
max. Earth dist.	-390 Oct 20 j 06:56	2°♎25'09	2.43068 AU	retrograde	-384 Feb 15 j 10:38	5°♋16'50	
	-390 Nov 25 j 22:02	0°♏			-384 Mar 15 j 18:33	30°♎	
				opposition	-384 Mar 23 j 00:06	27°♎26'03	2°53'32
conjunction	-390 Nov 28 j 13:46	2°♏02'18	0°-34'-12	greatest brilliancy	-384 Mar 24 j 03:57	27°♎00'24	-1.8m
minimum elong	-390 Nov 28 j 11:42	1°♏58'19	0°34'12	min. Earth dist.	-384 Mar 30 j 13:02	24°♎39'51	0.55883 AU
	-389 Jan 03 j 12:50	0°♐		direct	-384 May 02 j 02:27	17°♎58'46	
morning rise	-389 Jan 31 j 20:41	22°♐16'00		desc. node	-384 May 27 j 04:10	21°♎48'17	
	-389 Feb 10 j 16:58	0°♑			-384 Jun 18 j 02:18	0°♋	
	-389 Mar 21 j 07:42	0°♒			-384 Aug 09 j 20:28	0°♎	
	-389 Apr 30 j 05:59	0°♓			-384 Sep 21 j 15:29	0°♏	
	-389 Jun 11 j 08:53	0°♈			-384 Oct 31 j 10:17	0°♐	
	-389 Jul 26 j 19:25	0°♉			-384 Dec 09 j 10:14	0°♑	
asc. node	-389 Aug 05 j 11:32	6°♉00'24			-383 Jan 17 j 23:03	0°♒	
	-389 Sep 16 j 12:49	0°♊			-383 Feb 27 j 21:19	0°♓	
retrograde	-389 Nov 30 j 11:06	24°♊09'19		asc. node	-383 Mar 27 j 08:20	19°♓24'32	
opposition	-388 Jan 09 j 12:05	14°♊28'44	4°24'47	evening set	-383 Apr 07 j 06:46	26°♓58'54	
greatest brilliancy	-388 Jan 09 j 10:52	14°♊29'57	-1.2m		-383 Apr 11 j 16:14	0°♈	
min. Earth dist.	-388 Jan 09 j 14:43	14°♊26'06	0.67546 AU		-383 May 26 j 08:45	0°♉	
direct	-388 Feb 19 j 06:06	4°♊39'50					
	-388 May 08 j 12:30	0°♌		conjunction	-383 May 30 j 01:29	2°♉25'57	0°35'43
	-388 Jan 30 j 06:01	0°♍		minimum elong	-383 May 30 j 00:09	2°♉23'45	0°35'42
	-388 Aug 15 j 06:35	0°♋		max. Earth dist.	-383 Jun 15 j 23:51	13°♉29'12	2.63136 AU
desc. node	-388 Aug 22 j 06:46	4°♋49'27			-383 Jul 11 j 14:47	0°☿	
	-388 Sep 26 j 12:50	0°♎		morning rise	-383 Jul 17 j 14:13	3°☿49'12	
	-388 Nov 05 j 08:17	0°♏			-383 Aug 27 j 22:38	0°♌	
evening set	-388 Nov 30 j 20:02	19°♏50'16			-383 Oct 15 j 02:41	0°♍	
	-388 Dec 13 j 18:00	0°♐			-383 Dec 03 j 16:04	0°♋	
	-387 Jan 20 j 18:02	0°♑			-382 Jan 26 j 10:21	0°♎	
				retrograde	-382 Apr 14 j 01:33	25°♎08'43	
conjunction	-387 Feb 05 j 08:30	12°♑14'01	-1°-4'-15	desc. node	-382 Apr 14 j 04:09	25°♎08'42	
minimum elong	-387 Feb 05 j 09:44	12°♑16'26	1°04'17	opposition	-382 May 16 j 10:18	19°♎13'10	-1°-56'-34
	-387 Feb 28 j 06:59	0°♒		greatest brilliancy	-382 May 17 j 05:25	18°♎58'18	-2.5m
max. Earth dist.	-387 Mar 26 j 23:22	20°♒12'36	2.40556 AU	min. Earth dist.	-382 May 24 j 00:46	16°♎52'13	0.42929 AU
	-387 Apr 09 j 04:28	0°♓		direct	-382 Jun 20 j 10:09	12°♎07'58	
morning rise	-387 Apr 14 j 08:41	3°♓47'39			-382 Aug 15 j 21:57	0°♏	
	-387 May 21 j 01:56	0°♈			-382 Oct 02 j 19:16	0°♐	
asc. node	-387 Jun 22 j 09:54	22°♈02'30			-382 Nov 14 j 07:26	0°♑	
	-387 Jul 04 j 10:45	0°♉			-382 Dec 26 j 03:23	0°♒	
	-387 Aug 20 j 21:11	0°♊			-381 Feb 06 j 19:46	0°♓	
	-387 Oct 12 j 13:28	0°♌		asc. node	-381 Feb 12 j 06:15	3°♓45'13	
retrograde	-386 Jan 04 j 04:48	27°♌45'12			-381 Mar 22 j 23:09	0°♈	
opposition	-386 Feb 12 j 03:28	18°♌45'17	4°30'41		-381 May 07 j 14:21	0°♉	
greatest brilliancy	-386 Feb 12 j 22:16	18°♌26'56	-1.3m	evening set	-381 May 22 j 03:03	9°♉23'18	
min. Earth dist.	-386 Feb 16 j 03:24	17°♌11'45	0.64910 AU		-381 Jun 23 j 07:01	0°☿	
direct	-386 Mar 25 j 12:53	8°♌44'03					
	-386 Jun 02 j 13:01	0°♍		conjunction	-381 Jul 08 j 19:47	9°☿54'17	1°04'57
desc. node	-386 Jul 10 j 05:23	21°♍24'10		minimum elong	-381 Jul 08 j 18:56	9°☿52'56	1°04'57
	-386 Jul 23 j 19:38	0°♎		max. Earth dist.	-381 Jul 10 j 01:01	10°☿40'51	2.67252 AU
	-386 Sep 05 j 13:40	0°♏			-381 Aug 09 j 08:41	0°♌	
	-386 Oct 15 j 21:10	0°♏		morning rise	-381 Aug 22 j 22:48	8°♌40'29	
	-386 Nov 23 j 12:00	0°♐			-381 Sep 25 j 04:34	0°♍	
	-386 Dec 31 j 16:19	0°♑			-381 Nov 10 j 11:13	0°♋	
	-385 Feb 08 j 11:05	0°♒			-381 Dec 26 j 06:37	0°♎	
evening set	-385 Feb 09 j 05:58	0°♒35'57			-380 Feb 10 j 01:58	0°♏	
	-385 Mar 20 j 15:45	0°♓		desc. node	-380 Mar 01 j 03:28	12°♏58'23	
					-380 Mar 28 j 04:44	0°♐	
conjunction	-385 Apr 12 j 06:10	16°♓16'35	0°-17'-10		-380 May 22 j 15:01	0°♑	
minimum elong	-385 Apr 12 j 07:16	16°♓18'31	0°17'10	retrograde	-380 Jul 01 j 21:24	9°♑31'09	
	-385 May 01 j 19:03	0°♈		min. Earth dist.	-380 Jul 29 j 10:16	5°♑02'13	0.37993 AU
asc. node	-385 May 10 j 09:00	5°♈55'43		greatest brilliancy	-380 Aug 01 j 03:20	4°♑17'39	-2.8m

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 3

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

opposition	-380 Aug 02 j 02:18	4° ≈ 01'54	-6°-49'-10	desc. node	-375 Oct 22 j 00:01	28° Δ 22'58	
	-380 Aug 19 j 12:46	30° R 3			-375 Oct 24 j 05:05	0° M	
direct	-380 Aug 31 j 15:35	29° Σ 01'55					
	-380 Sep 12 j 22:22	0° ≈		conjunction	-375 Nov 06 j 06:11	9° M 37'34	0°-9'-52
	-380 Nov 22 j 23:53	0° ⋈		minimum elong	-375 Nov 06 j 05:37	9° M 36'30	0°09'53
asc. node	-380 Dec 30 j 04:57	22° ⋈ 17'32		behind sun begin	-375 Nov 05 j 10:51	9° M 01'40	
	-379 Jan 11 j 14:54	0° Υ		behind sun end	-375 Nov 07 j 00:23	10° M 11'22	
	-379 Feb 28 j 07:32	0° ♂			-375 Dec 03 j 07:03	0° ♂	
	-379 Apr 16 j 23:40	0° ♂		morning rise	-374 Jan 03 j 18:07	24° ♂ 16'36	
	-379 Jun 03 j 18:36	0° ♂			-374 Jan 11 j 02:17	0° Σ	
evening set	-379 Jun 28 j 20:54	15° ♂ 49'29			-374 Feb 18 j 09:54	0° ≈	
	-379 Jul 21 j 04:22	0° ♂			-374 Mar 29 j 03:02	0° ⋈	
max. Earth dist.	-379 Aug 01 j 16:43	7° ♂ 22'07	2.65919 AU		-374 May 08 j 04:02	0° Υ	
					-374 Jun 19 j 14:02	0° ♂	
conjunction	-379 Aug 13 j 18:02	15° ♂ 08'01	1°07'43		-374 Aug 05 j 01:42	0° ♂	
minimum elong	-379 Aug 13 j 18:35	15° ♂ 08'53	1°07'43	asc. node	-374 Aug 22 j 02:37	9° ♂ 58'42	
	-379 Sep 05 j 14:15	0° ♂			-374 Oct 01 j 03:52	0° ♂	
morning rise	-379 Sep 27 j 16:10	14° ♂ 35'32		retrograde	-374 Nov 17 j 02:41	11° ♂ 16'14	
	-379 Oct 20 j 14:21	0° ♂		min. Earth dist.	-374 Dec 25 j 21:31	1° ♂ 59'15	0.66790 AU
	-379 Dec 03 j 02:25	0° M		opposition	-374 Dec 27 j 06:59	1° ♂ 25'44	4°01'03
	-378 Jan 14 j 06:16	0° ♂		greatest brilliancy	-374 Dec 26 j 23:05	1° ♂ 33'38	-1.3m
desc. node	-378 Jan 17 j 02:22	2° ♂ 02'52			-374 Dec 30 j 21:00	30° R 11	
	-378 Feb 24 j 10:39	0° Σ		direct	-373 Feb 05 j 09:43	21° ♂ 49'15	
	-378 Apr 06 j 08:23	0° ≈			-373 Mar 18 j 00:05	0° ♂	
	-378 May 18 j 11:52	0° ⋈			-373 May 20 j 06:55	0° ♂	
	-378 Jul 05 j 08:38	0° Υ			-373 Jul 09 j 12:55	0° ♂	
retrograde	-378 Aug 31 j 20:09	18° Υ 30'41			-373 Aug 23 j 21:20	0° ♂	
min. Earth dist.	-378 Sep 30 j 00:43	12° Υ 39'49	0.48670 AU	desc. node	-373 Sep 08 j 22:31	11° ♂ 12'29	
greatest brilliancy	-378 Oct 07 j 04:46	10° Υ 03'44	-2.2m		-373 Oct 04 j 23:33	0° M	
opposition	-378 Oct 08 j 01:16	9° Υ 45'06	-2°-3'-24	evening set	-373 Nov 06 j 14:55	24° ♂ 29'46	
direct	-378 Nov 10 j 15:47	2° Υ 37'53			-373 Nov 13 j 19:09	0° ♂	
asc. node	-378 Nov 17 j 04:54	2° Υ 54'17			-373 Dec 22 j 06:16	0° Σ	
	-377 Jan 30 j 21:47	0° ♂					
	-377 Mar 25 j 21:22	0° ♂		conjunction	-372 Jan 08 j 14:52	13° Σ 41'40	-1°-2'-32
	-377 May 15 j 06:05	0° ♂		minimum elong	-372 Jan 08 j 13:07	13° Σ 38'13	1°02'33
	-377 Jul 02 j 17:19	0° ♂		max. Earth dist.	-372 Jan 08 j 10:21	13° Σ 32'45	2.37258 AU
evening set	-377 Aug 05 j 14:17	21° ♂ 41'11			-372 Jan 29 j 07:09	0° ≈	
	-377 Aug 18 j 07:13	0° ♂			-372 Mar 07 j 19:47	0° ⋈	
max. Earth dist.	-377 Aug 27 j 06:49	5° ♂ 56'32	2.59309 AU	morning rise	-372 Mar 18 j 09:53	8° ⋈ 05'31	
					-372 Apr 16 j 16:12	0° Υ	
conjunction	-377 Sep 21 j 13:20	22° ♂ 57'36	0°42'41		-372 May 28 j 13:23	0° ♂	
minimum elong	-377 Sep 21 j 14:39	22° ♂ 59'51	0°42'41	asc. node	-372 Jul 09 j 02:11	28° ♂ 01'06	
	-377 Oct 01 j 19:33	0° ♂			-372 Jul 12 j 03:13	0° ♂	
morning rise	-377 Nov 09 j 00:31	26° ♂ 55'02			-372 Aug 29 j 12:13	0° ♂	
	-377 Nov 13 j 07:12	0° M			-372 Oct 25 j 14:51	0° ♂	
desc. node	-377 Dec 05 j 01:23	15° M 52'31		retrograde	-372 Dec 20 j 21:02	14° ♂ 41'46	
	-377 Dec 24 j 01:28	0° ♂		opposition	-371 Jan 29 j 09:23	5° ♂ 23'10	4°38'12
	-376 Feb 01 j 14:35	0° Σ		greatest brilliancy	-371 Jan 29 j 20:25	5° ♂ 12'17	-1.3m
	-376 Mar 11 j 15:06	0° ≈		min. Earth dist.	-371 Jan 31 j 21:07	4° ♂ 24'14	0.66741 AU
	-376 Apr 20 j 01:12	0° ⋈			-371 Feb 12 j 18:41	30° R 26	
	-376 May 31 j 03:45	0° Υ		direct	-371 Mar 11 j 17:18	25° ♂ 22'49	
	-376 Jul 15 j 07:33	0° ♂			-371 Apr 09 j 22:35	0° ♂	
	-376 Sep 13 j 23:18	0° ♂			-371 Jun 14 j 14:42	0° ♂	
asc. node	-376 Oct 04 j 03:57	4° ♂ 27'54		desc. node	-371 Jul 26 j 22:16	26° ♂ 04'57	
retrograde	-376 Oct 12 j 10:40	4° ♂ 55'24			-371 Aug 01 j 20:27	0° ♂	
	-376 Nov 08 j 03:01	30° R 8			-371 Sep 13 j 19:06	0° M	
min. Earth dist.	-376 Nov 15 j 22:23	27° ♂ 04'40	0.60400 AU		-371 Oct 23 j 19:34	0° ♂	
opposition	-376 Nov 21 j 02:46	25° ♂ 01'20	1°58'48		-371 Dec 01 j 06:56	0° Σ	
greatest brilliancy	-376 Nov 20 j 13:04	25° ♂ 14'55	-1.6m	greatest brilliancy	-371 Dec 02 j 04:39	0° Σ 42'46	1.2m
direct	-376 Dec 28 j 16:52	16° ♂ 17'25			-370 Jan 08 j 08:17	0° ≈	
	-375 Feb 21 j 01:34	0° ♂		evening set	-370 Jan 13 j 04:40	3° ≈ 48'21	
	-375 Apr 21 j 20:31	0° ♂			-370 Feb 15 j 23:28	0° ⋈	
	-375 Jun 12 j 02:26	0° ♂					
	-375 Jul 29 j 14:18	0° ♂		conjunction	-370 Mar 19 j 20:44	24° ⋈ 00'24	0°-40'-5
	-375 Sep 12 j 03:48	0° ♂		minimum elong	-370 Mar 19 j 23:18	24° ⋈ 05'09	0°40'04
evening set	-375 Sep 15 j 03:09	2° ♂ 04'01			-370 Mar 28 j 00:05	0° Υ	
max. Earth dist.	-375 Sep 29 j 19:09	12° ♂ 23'13	2.48151 AU	max. Earth dist.	-370 May 03 j 11:14	26° Υ 08'45	2.48811 AU

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 4

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-370 May 08 j 23:35	0°♄		min. Earth dist.	-365 Jul 03 j 11:31	2°♄43'51	0.37754 AU
morning rise	-370 May 19 j 15:04	7°♄21'53			-365 Jul 14 j 14:19	30°♄	
asc. node	-370 May 27 j 00:22	12°♄25'18		direct	-365 Aug 01 j 05:48	28°♄02'24	
	-370 Jun 22 j 04:57	0°♄			-365 Aug 18 j 11:25	0°♄	
	-370 Aug 07 j 19:14	0°♄			-365 Oct 22 j 13:32	0°♄	
	-370 Sep 26 j 08:02	0°♄			-365 Dec 08 j 16:21	0°♄	
	-370 Nov 21 j 05:35	0°♄		asc. node	-364 Jan 16 j 21:24	25°♄54'36	
retrograde	-369 Jan 28 j 17:42	20°♄00'00			-364 Jan 23 j 01:59	0°♄	
opposition	-369 Mar 07 j 10:24	11°♄37'30	3°47'10		-364 Mar 08 j 20:47	0°♄	
greatest brilliancy	-369 Mar 08 j 14:01	11°♄11'18	-1.5m		-364 Apr 24 j 12:21	0°♄	
min. Earth dist.	-369 Mar 13 j 16:57	9°♄14'54	0.60144 AU		-364 Jun 10 j 18:14	0°♄	
direct	-369 Apr 17 j 08:30	1°♄48'24		evening set	-364 Jun 14 j 04:17	2°♄09'59	
desc. node	-369 Jun 13 j 21:20	18°♄15'08		max. Earth dist.	-364 Jul 23 j 11:38	27°♄08'17	2.67080 AU
	-369 Jul 05 j 20:46	0°♄			-364 Jul 27 j 23:11	0°♄	
	-369 Aug 21 j 17:15	0°♄					
	-369 Oct 02 j 01:40	0°♄		conjunction	-364 Jul 30 j 10:33	1°♄34'51	1°09'50
	-369 Nov 10 j 04:42	0°♄		minimum elong	-364 Jul 30 j 10:32	1°♄34'51	1°09'50
	-369 Dec 18 j 17:47	0°♄			-364 Sep 12 j 11:25	0°♄	
	-368 Jan 26 j 20:50	0°♄		morning rise	-364 Sep 13 j 01:51	0°♄23'33	
	-368 Mar 07 j 09:59	0°♄			-364 Oct 27 j 20:47	0°♄	
evening set	-368 Mar 17 j 17:04	7°♄24'33			-364 Dec 11 j 01:16	0°♄	
asc. node	-368 Apr 12 j 23:00	25°♄54'30			-363 Jan 23 j 04:23	0°♄	
	-368 Apr 18 j 20:50	0°♄		desc. node	-363 Feb 02 j 18:45	7°♄27'29	
					-363 Mar 06 j 15:37	0°♄	
conjunction	-368 May 12 j 15:28	16°♄12'22	0°17'36		-363 Apr 18 j 09:55	0°♄	
minimum elong	-368 May 12 j 14:37	16°♄10'56	0°17'36		-363 Jun 03 j 12:55	0°♄	
	-368 Jun 02 j 07:46	0°♄		retrograde	-363 Aug 11 j 06:42	25°♄08'53	
max. Earth dist.	-368 Jun 05 j 14:20	2°♄09'38	2.60062 AU	min. Earth dist.	-363 Sep 07 j 14:25	20°♄07'42	0.43602 AU
morning rise	-368 Jul 02 j 13:28	19°♄44'40		greatest brilliancy	-363 Sep 13 j 23:08	18°♄00'44	-2.5m
	-368 Jul 18 j 12:42	0°♄		opposition	-363 Sep 15 j 11:34	17°♄30'14	-4°-12'-57
	-368 Sep 04 j 03:53	0°♄		direct	-363 Oct 17 j 05:35	11°♄16'27	
	-368 Oct 23 j 08:00	0°♄		asc. node	-363 Dec 03 j 19:54	23°♄03'31	
	-368 Dec 14 j 17:35	0°♄			-363 Dec 19 j 01:02	0°♄	
	-367 Feb 21 j 20:21	0°♄			-362 Feb 12 j 06:00	0°♄	
retrograde	-367 Mar 19 j 09:55	3°♄34'10			-362 Apr 03 j 16:36	0°♄	
	-367 Apr 12 j 10:10	30°♄			-362 May 22 j 18:11	0°♄	
opposition	-367 Apr 22 j 13:41	26°♄47'47	0°26'59		-362 Jul 09 j 16:51	0°♄	
greatest brilliancy	-367 Apr 22 j 19:53	26°♄42'32	-2.2m	evening set	-362 Jul 21 j 18:27	7°♄41'21	
desc. node	-367 Apr 30 j 19:34	24°♄00'05		max. Earth dist.	-362 Aug 16 j 20:52	24°♄33'52	2.62488 AU
min. Earth dist.	-367 May 01 j 00:57	23°♄55'39	0.48064 AU		-362 Aug 25 j 03:50	0°♄	
direct	-367 May 30 j 04:59	18°♄28'53					
	-367 Jul 13 j 15:09	0°♄		conjunction	-362 Sep 05 j 22:18	7°♄47'15	0°55'47
	-367 Sep 02 j 23:43	0°♄		minimum elong	-362 Sep 05 j 23:29	7°♄49'15	0°55'47
	-367 Oct 15 j 08:05	0°♄			-362 Oct 08 j 19:27	0°♄	
	-367 Nov 24 j 17:44	0°♄		morning rise	-362 Oct 22 j 10:42	9°♄25'08	
	-366 Jan 04 j 06:58	0°♄			-362 Nov 20 j 15:01	0°♄	
	-366 Feb 15 j 01:15	0°♄		desc. node	-362 Dec 21 j 17:10	22°♄32'26	
asc. node	-366 Feb 28 j 22:48	9°♄43'52			-362 Dec 31 j 19:54	0°♄	
	-366 Mar 30 j 12:11	0°♄			-361 Feb 09 j 20:48	0°♄	
evening set	-366 May 05 j 18:03	24°♄09'19			-361 Mar 21 j 09:26	0°♄	
	-366 May 14 j 16:05	0°♄			-361 Apr 30 j 09:51	0°♄	
					-361 Jun 11 j 14:50	0°♄	
conjunction	-366 Jun 24 j 00:19	26°♄05'33	0°56'44		-361 Jul 30 j 11:39	0°♄	
minimum elong	-366 Jun 23 j 23:04	26°♄03'34	0°56'44	retrograde	-361 Sep 28 j 04:03	18°♄48'55	
	-366 Jun 30 j 02:44	0°♄		asc. node	-361 Oct 21 j 19:40	14°♄50'21	
max. Earth dist.	-366 Jul 01 j 00:50	0°♄35'21	2.66280 AU	min. Earth dist.	-361 Oct 30 j 15:37	11°♄41'08	0.56298 AU
morning rise	-366 Aug 09 j 01:48	25°♄28'05		opposition	-361 Nov 06 j 04:35	9°♄08'32	0°41'51
	-366 Aug 16 j 04:54	0°♄		greatest brilliancy	-361 Nov 05 j 21:58	9°♄14'59	-1.8m
	-366 Oct 02 j 09:45	0°♄		direct	-361 Dec 12 j 10:08	0°♄55'48	
	-366 Nov 18 j 13:50	0°♄			-360 Mar 07 j 14:46	0°♄	
	-365 Jan 05 j 03:51	0°♄			-360 Apr 30 j 20:09	0°♄	
	-365 Feb 23 j 15:45	0°♄			-360 Jun 19 j 16:16	0°♄	
desc. node	-365 Mar 18 j 18:58	12°♄27'46			-360 Aug 05 j 17:12	0°♄	
	-365 Apr 24 j 00:32	0°♄		evening set	-360 Aug 29 j 02:53	15°♄34'19	
retrograde	-365 Jun 01 j 11:47	8°♄11'24		max. Earth dist.	-360 Sep 14 j 10:50	26°♄42'41	2.52949 AU
opposition	-365 Jul 01 j 16:50	3°♄12'22	-6°-5'-29		-360 Sep 19 j 05:04	0°♄	
greatest brilliancy	-365 Jul 02 j 03:49	3°♄05'02	-2.8m				

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 5

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

conjunction	-360 Oct 17 j 14:28	20°♄01'32	0°13'20		-355 Aug 15 j 12:06	0°♄	
minimum elong	-360 Oct 17 j 15:06	20°♄02'39	0°13'20		-355 Oct 05 j 15:19	0°♄	
behind sun begin	-360 Oct 17 j 02:33	19°♄40'09			-355 Dec 10 j 01:12	0°♄	
behind sun end	-360 Oct 18 j 03:40	20°♄25'11		retrograde	-354 Jan 12 j 18:40	5°♄55'26	
	-360 Oct 31 j 09:30	0°♄			-354 Feb 12 j 16:27	30°♄♄	
desc. node	-360 Nov 07 j 16:28	5°♄20'13		opposition	-354 Feb 20 j 08:19	27°♄07'33	4°19'28
morning rise	-360 Dec 10 j 04:51	29°♄37'36		greatest brilliancy	-354 Feb 21 j 06:59	26°♄45'36	-1.4m
	-360 Dec 10 j 16:40	0°♄		min. Earth dist.	-354 Feb 25 j 04:31	25°♄15'11	0.63481 AU
	-359 Jan 18 j 17:34	0°♄		direct	-354 Apr 02 j 15:59	17°♄08'14	
	-359 Feb 26 j 06:15	0°♄			-354 May 23 j 11:17	0°♄	
	-359 Apr 06 j 03:41	0°♄		desc. node	-354 Jun 30 j 13:06	19°♄44'05	
	-359 May 16 j 10:19	0°♄			-354 Jul 17 j 11:14	0°♄	
	-359 Jun 28 j 09:50	0°♄			-354 Aug 31 j 01:16	0°♄	
	-359 Aug 15 j 21:27	0°♄			-354 Oct 10 j 16:02	0°♄	
asc. node	-359 Sep 07 j 18:36	11°♄55'25			-354 Nov 18 j 10:28	0°♄	
retrograde	-359 Nov 03 j 15:26	27°♄57'23			-354 Dec 26 j 17:14	0°♄	
min. Earth dist.	-359 Dec 10 j 21:00	19°♄10'42	0.65041 AU		-353 Feb 03 j 14:03	0°♄	
opposition	-359 Dec 13 j 18:30	18°♄01'02	3°24'59	evening set	-353 Feb 23 j 12:32	15°♄00'35	
greatest brilliancy	-359 Dec 13 j 05:43	18°♄13'51	-1.4m		-353 Mar 15 j 20:45	0°♄	
direct	-358 Jan 22 j 01:01	8°♄41'18					
	-358 Apr 03 j 16:41	0°♄		conjunction	-353 Apr 24 j 06:38	28°♄03'39	0°-3'-55
	-358 May 29 j 12:26	0°♄		minimum elong	-353 Apr 24 j 06:50	28°♄03'59	0°03'57
	-358 Jul 17 j 08:23	0°♄		behind sun begin	-353 Apr 23 j 07:46	27°♄23'51	
	-358 Aug 31 j 07:05	0°♄		behind sun end	-353 Apr 25 j 05:54	28°♄44'05	
desc. node	-358 Sep 25 j 15:54	17°♄53'18			-353 Apr 27 j 01:37	0°♄	
	-358 Oct 12 j 08:00	0°♄		asc. node	-353 Apr 30 j 16:00	2°♄29'34	
evening set	-358 Oct 15 j 05:15	2°♄07'26		max. Earth dist.	-353 May 25 j 21:42	19°♄41'28	2.56182 AU
max. Earth dist.	-358 Nov 05 j 21:29	18°♄19'10	2.40396 AU		-353 Jun 10 j 08:30	0°♄	
	-358 Nov 21 j 05:14	0°♄		morning rise	-353 Jun 17 j 09:07	4°♄38'14	
					-353 Jul 26 j 14:18	0°♄	
conjunction	-358 Dec 12 j 11:56	16°♄28'17	0°-46'-51		-353 Sep 12 j 16:59	0°♄	
minimum elong	-358 Dec 12 j 09:19	16°♄23'11	0°46'50		-353 Nov 02 j 10:08	0°♄	
	-358 Dec 29 j 18:35	0°♄			-353 Dec 30 j 15:06	0°♄	
	-357 Feb 05 j 21:02	0°♄		retrograde	-352 Feb 26 j 12:21	15°♄10'11	
morning rise	-357 Feb 17 j 17:12	9°♄17'09		opposition	-352 Apr 02 j 07:22	7°♄39'57	2°09'53
	-357 Mar 16 j 10:03	0°♄		greatest brilliancy	-352 Apr 03 j 07:25	7°♄18'17	-1.9m
	-357 Apr 25 j 06:25	0°♄		min. Earth dist.	-352 Apr 10 j 08:56	4°♄46'01	0.53239 AU
	-357 Jun 06 j 05:25	0°♄			-352 Apr 26 j 23:12	30°♄♄	
	-357 Jul 21 j 05:03	0°♄		direct	-352 May 11 j 17:34	28°♄30'56	
asc. node	-357 Jul 26 j 16:41	3°♄29'02		desc. node	-352 May 17 j 12:17	28°♄44'26	
	-357 Sep 09 j 05:26	0°♄			-352 May 26 j 19:59	0°♄	
	-357 Nov 19 j 23:30	0°♄			-352 Aug 01 j 19:22	0°♄	
retrograde	-357 Dec 08 j 04:41	1°♄56'15			-352 Sep 15 j 04:59	0°♄	
	-357 Dec 25 j 10:18	30°♄♄			-352 Oct 25 j 14:36	0°♄	
opposition	-356 Jan 17 j 02:27	22°♄22'41	4°33'08		-352 Dec 03 j 23:13	0°♄	
greatest brilliancy	-356 Jan 17 j 05:32	22°♄19'38	-1.2m		-351 Jan 12 j 18:15	0°♄	
min. Earth dist.	-356 Jan 18 j 01:42	21°♄59'35	0.67550 AU		-351 Feb 22 j 21:44	0°♄	
direct	-356 Feb 27 j 02:53	12°♄28'30		asc. node	-351 Mar 17 j 14:19	16°♄00'43	
	-356 Apr 30 j 01:29	0°♄			-351 Apr 06 j 20:50	0°♄	
	-356 Jun 24 j 10:44	0°♄		evening set	-351 Apr 18 j 01:52	7°♄36'58	
	-356 Aug 10 j 03:16	0°♄			-351 May 21 j 16:15	0°♄	
desc. node	-356 Aug 12 j 14:36	1°♄40'47					
	-356 Sep 21 j 15:17	0°♄		conjunction	-351 Jun 08 j 10:11	11°♄35'59	0°44'33
	-356 Oct 31 j 12:37	0°♄		minimum elong	-351 Jun 08 j 08:47	11°♄33'42	0°44'33
	-356 Dec 08 j 22:58	0°♄		max. Earth dist.	-351 Jun 21 j 16:40	20°♄11'22	2.64489 AU
evening set	-356 Dec 16 j 02:18	5°♄37'57			-351 Jul 06 j 22:55	0°♄	
	-355 Jan 15 j 23:11	0°♄		morning rise	-351 Jul 25 j 22:04	12°♄06'14	
					-351 Aug 23 j 03:45	0°♄	
conjunction	-355 Feb 21 j 06:49	28°♄17'35	0°-58'-31		-351 Oct 09 j 21:30	0°♄	
minimum elong	-355 Feb 21 j 09:19	28°♄22'25	0°58'31		-351 Nov 27 j 09:04	0°♄	
	-355 Feb 23 j 12:09	0°♄			-350 Jan 17 j 00:43	0°♄	
	-355 Apr 04 j 09:39	0°♄			-350 Mar 18 j 04:08	0°♄	
max. Earth dist.	-355 Apr 13 j 03:35	6°♄23'54	2.43432 AU	desc. node	-350 Apr 04 j 10:56	5°♄49'04	
morning rise	-355 Apr 28 j 00:26	17°♄07'06		retrograde	-350 Apr 30 j 12:18	9°♄39'11	
	-355 May 16 j 06:24	0°♄		opposition	-350 May 31 j 21:09	4°♄11'11	-3°-32'-27
asc. node	-355 Jun 12 j 16:29	18°♄47'49		greatest brilliancy	-350 Jun 01 j 22:31	3°♄52'43	-2.7m
	-355 Jun 29 j 12:05	0°♄		min. Earth dist.	-350 Jun 07 j 03:34	2°♄22'19	0.40527 AU

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 6

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-350 Jun 16 j 07:24	30° \mathbb{M}			-345 Sep 27 j 04:57	0° $\underline{\mathbb{A}}$		
direct	-350 Jul 04 j 03:08	27° \mathbb{M} 52'47						
	-350 Jul 21 j 23:59	0° \mathbb{A}		conjunction	-345 Sep 30 j 22:25	2° $\underline{\mathbb{A}}$ 34'52	0°33'08	
	-350 Sep 22 j 23:55	0° \mathbb{C}		minimum elong	-345 Sep 30 j 23:38	2° $\underline{\mathbb{A}}$ 36'58	0°33'07	
	-350 Nov 06 j 23:03	0° \approx			-345 Nov 08 j 14:28	0° \mathbb{M}		
	-350 Dec 19 j 22:28	0° \mathbb{H}		morning rise	-345 Nov 19 j 21:08	8° \mathbb{M} 12'57		
	-349 Feb 01 j 07:15	0° \mathbb{Y}		desc. node	-345 Nov 25 j 09:09	12° \mathbb{M} 15'26		
asc. node	-349 Feb 02 j 13:16	0° \mathbb{Y} 51'15			-345 Dec 19 j 05:00	0° \mathbb{A}		
	-349 Mar 17 j 21:16	0° \mathbb{B}			-344 Jan 27 j 13:37	0° \mathbb{C}		
	-349 May 02 j 19:17	0° \mathbb{I}			-344 Mar 06 j 09:22	0° \approx		
evening set	-349 May 31 j 01:23	18° \mathbb{I} 08'15			-344 Apr 14 j 13:30	0° \mathbb{H}		
	-349 Jun 18 j 15:38	0° \mathbb{C}			-344 May 25 j 05:49	0° \mathbb{Y}		
max. Earth dist.	-349 Jul 15 j 07:50	16° \mathbb{C} 58'49	2.67423 AU		-344 Jul 08 j 06:12	0° \mathbb{B}		
					-344 Aug 30 j 07:23	0° \mathbb{I}		
conjunction	-349 Jul 17 j 02:45	18° \mathbb{C} 07'07	1°07'54	asc. node	-344 Sep 24 j 10:04	9° \mathbb{I} 43'19		
minimum elong	-349 Jul 17 j 02:12	18° \mathbb{C} 06'15	1°07'54	retrograde	-344 Oct 20 j 18:27	13° \mathbb{I} 54'47		
	-349 Aug 04 j 18:04	0° \mathbb{Q}		min. Earth dist.	-344 Nov 25 j 06:36	5° \mathbb{I} 42'38	0.62301 AU	
morning rise	-349 Aug 30 j 22:32	16° \mathbb{Q} 46'17		opposition	-344 Nov 29 j 15:40	3° \mathbb{I} 57'48	2°35'16	
	-349 Sep 20 j 10:42	0° \mathbb{M}		greatest brilliancy	-344 Nov 29 j 00:55	4° \mathbb{I} 12'32	-1.5m	
	-349 Nov 05 j 08:38	0° $\underline{\mathbb{A}}$			-344 Dec 10 j 02:21	30° \mathbb{R} \mathbb{B}		
	-349 Dec 20 j 11:32	0° \mathbb{M}		direct	-343 Jan 06 j 21:11	24° \mathbb{B} 59'30		
	-348 Feb 03 j 01:37	0° \mathbb{A}			-343 Feb 06 j 13:31	0° \mathbb{I}		
desc. node	-348 Feb 20 j 10:50	11° \mathbb{A} 42'31			-343 Apr 15 j 07:52	0° \mathbb{C}		
	-348 Mar 18 j 19:50	0° \mathbb{C}			-343 Jun 06 j 20:29	0° \mathbb{Q}		
	-348 May 05 j 03:39	0° \approx			-343 Jul 24 j 18:49	0° \mathbb{M}		
retrograde	-348 Jul 17 j 21:28	27° \approx 20'49			-343 Sep 07 j 11:41	0° $\underline{\mathbb{A}}$		
min. Earth dist.	-348 Aug 13 j 12:50	22° \approx 52'08	0.39451 AU	evening set	-343 Sep 25 j 11:33	12° $\underline{\mathbb{A}}$ 37'35		
greatest brilliancy	-348 Aug 17 j 22:54	21° \approx 34'38	-2.7m	max. Earth dist.	-343 Oct 10 j 12:08	23° $\underline{\mathbb{A}}$ 24'32	2.45341 AU	
opposition	-348 Aug 19 j 09:54	21° \approx 08'50	-6°-12'-52	desc. node	-343 Oct 12 j 07:38	24° $\underline{\mathbb{A}}$ 43'27		
direct	-348 Sep 18 j 13:49	15° \approx 48'38			-343 Oct 19 j 13:12	0° \mathbb{M}		
	-348 Nov 09 j 15:49	0° \mathbb{H}						
asc. node	-348 Dec 20 j 12:13	21° \mathbb{H} 33'01		conjunction	-343 Nov 18 j 12:11	22° \mathbb{M} 20'24	0°-23'-50	
	-347 Jan 03 j 23:48	0° \mathbb{Y}		minimum elong	-343 Nov 18 j 10:45	22° \mathbb{M} 17'40	0°23'51	
	-347 Feb 22 j 09:23	0° \mathbb{B}			-343 Nov 28 j 13:41	0° \mathbb{A}		
	-347 Apr 11 j 19:55	0° \mathbb{I}			-342 Jan 06 j 06:50	0° \mathbb{C}		
	-347 May 29 j 23:58	0° \mathbb{C}		morning rise	-342 Jan 19 j 04:40	10° \mathbb{C} 07'11		
evening set	-347 Jul 07 j 04:27	24° \mathbb{C} 01'46		greatest brilliancy	-342 Jan 26 j 07:11	15° \mathbb{C} 42'00	1.2m	
	-347 Jul 16 j 13:54	0° \mathbb{Q}			-342 Feb 13 j 12:30	0° \approx		
max. Earth dist.	-347 Aug 07 j 04:34	13° \mathbb{Q} 51'04	2.64936 AU		-342 Mar 24 j 03:37	0° \mathbb{H}		
					-342 May 03 j 01:49	0° \mathbb{Y}		
conjunction	-347 Aug 22 j 00:42	23° \mathbb{Q} 28'25	1°04'34		-342 Jun 14 j 05:46	0° \mathbb{B}		
minimum elong	-347 Aug 22 j 01:32	23° \mathbb{Q} 29'46	1°04'33		-342 Jul 29 j 22:53	0° \mathbb{I}		
	-347 Sep 01 j 00:13	0° \mathbb{M}		asc. node	-342 Aug 12 j 09:50	8° \mathbb{I} 11'59		
morning rise	-347 Oct 06 j 08:12	23° \mathbb{M} 31'21			-342 Sep 21 j 03:27	0° \mathbb{C}		
	-347 Oct 15 j 21:23	0° $\underline{\mathbb{A}}$		retrograde	-342 Nov 24 j 19:19	19° \mathbb{C} 09'22		
	-347 Nov 28 j 03:22	0° \mathbb{M}		opposition	-341 Jan 03 j 22:04	9° \mathbb{C} 24'03	4°16'21	
desc. node	-346 Jan 07 j 10:49	28° \mathbb{M} 55'40		min. Earth dist.	-341 Jan 03 j 08:53	9° \mathbb{C} 37'15	0.67332 AU	
	-346 Jan 08 j 22:08	0° \mathbb{A}		greatest brilliancy	-341 Jan 03 j 17:44	9° \mathbb{C} 28'23	-1.2m	
	-346 Feb 18 j 14:52	0° \mathbb{C}			-341 Feb 06 j 04:04	30° \mathbb{R} \mathbb{I}		
	-346 Mar 30 j 21:26	0° \approx		direct	-341 Feb 13 j 09:34	29° \mathbb{I} 40'07		
	-346 May 10 j 22:53	0° \mathbb{H}			-341 Feb 20 j 19:48	0° \mathbb{C}		
	-346 Jun 24 j 13:32	0° \mathbb{Y}			-341 May 13 j 13:03	0° \mathbb{Q}		
	-346 Sep 02 j 01:00	0° \mathbb{B}			-341 Jul 04 j 04:21	0° \mathbb{M}		
retrograde	-346 Sep 11 j 09:10	0° \mathbb{B} 36'55			-341 Aug 18 j 23:09	0° $\underline{\mathbb{A}}$		
	-346 Sep 20 j 13:11	30° \mathbb{R} \mathbb{Y}		desc. node	-341 Aug 30 j 06:51	7° $\underline{\mathbb{A}}$ 49'59		
min. Earth dist.	-346 Oct 11 j 17:29	24° \mathbb{Y} 17'40	0.51517 AU		-341 Sep 30 j 05:00	0° \mathbb{M}		
opposition	-346 Oct 19 j 09:17	21° \mathbb{Y} 25'33	0°-56'-25		-341 Nov 09 j 01:17	0° \mathbb{A}		
greatest brilliancy	-346 Oct 18 j 23:49	21° \mathbb{Y} 34'26	-2.0m	evening set	-341 Nov 20 j 11:53	8° \mathbb{A} 50'58		
asc. node	-346 Nov 07 j 10:38	15° \mathbb{Y} 30'08			-341 Dec 17 j 11:54	0° \mathbb{C}		
direct	-346 Nov 23 j 00:38	13° \mathbb{Y} 52'09						
	-345 Jan 20 j 17:53	0° \mathbb{B}		conjunction	-340 Jan 24 j 18:11	0° \approx 11'54	-1°-5'-25	
	-345 Mar 19 j 14:19	0° \mathbb{I}		minimum elong	-340 Jan 24 j 18:06	0° \approx 11'43	1°05'27	
	-345 May 10 j 01:00	0° \mathbb{C}			-340 Jan 24 j 12:08	0° \approx		
	-345 Jun 27 j 22:41	0° \mathbb{Q}			-340 Mar 03 j 00:11	0° \mathbb{H}		
	-345 Aug 13 j 16:29	0° \mathbb{M}		max. Earth dist.	-340 Mar 05 j 20:38	2° \mathbb{H} 11'22	2.38504 AU	
evening set	-345 Aug 14 j 07:03	0° \mathbb{M} 23'57		morning rise	-340 Apr 03 j 01:44	23° \mathbb{H} 30'44		
max. Earth dist.	-345 Sep 02 j 21:26	13° \mathbb{M} 25'55	2.57243 AU		-340 Apr 11 j 20:01	0° \mathbb{Y}		

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 7

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-340 May 23 j 15:52	0°♄			-335 Dec 29 j 14:20	0°♅		
asc. node	-340 Jun 29 j 08:14	24°♄56'25			-334 Feb 09 j 18:52	0°♅		
	-340 Jul 07 j 00:43	0°♅		asc. node	-334 Feb 19 j 04:33	6°♅32'30		
	-340 Aug 23 j 17:23	0°♅			-334 Mar 25 j 13:27	0°♄		
	-340 Oct 16 j 16:55	0°♄			-334 May 09 j 22:25	0°♅		
retrograde	-340 Dec 29 j 00:06	22°♄35'54		evening set	-334 May 15 j 06:14	3°♅27'46		
opposition	-339 Feb 06 j 05:35	13°♄27'20	4°35'13		-334 Jun 25 j 11:41	0°♅		
greatest brilliancy	-339 Feb 06 j 21:03	13°♄12'10	-1.3m					
min. Earth dist.	-339 Feb 09 j 13:41	12°♄08'47	0.65853 AU	conjunction	-334 Jul 02 j 13:56	4°♅31'54	1°01'59	
direct	-339 Mar 19 j 15:07	3°♄25'44		minimum elong	-334 Jul 02 j 12:54	4°♅30'15	1°01'59	
	-339 Jun 07 j 06:44	0°♄		max. Earth dist.	-334 Jul 06 j 08:52	6°♅56'57	2.66928 AU	
desc. node	-339 Jul 17 j 05:34	23°♄35'23			-334 Aug 11 j 13:20	0°♄		
	-339 Jul 27 j 03:52	0°♄		morning rise	-334 Aug 17 j 01:20	3°♄30'14		
	-339 Sep 08 j 14:33	0°♄			-334 Sep 27 j 12:56	0°♄		
	-339 Oct 18 j 19:45	0°♄			-334 Nov 13 j 04:34	0°♄		
	-339 Nov 26 j 09:17	0°♄			-334 Dec 29 j 16:41	0°♄		
	-338 Jan 03 j 12:02	0°♄			-333 Feb 14 j 18:57	0°♄		
evening set	-338 Jan 28 j 16:23	19°♄37'30		desc. node	-333 Mar 09 j 03:25	13°♄47'17		
	-338 Feb 11 j 04:17	0°♅			-333 Apr 05 j 22:47	0°♄		
	-338 Mar 23 j 05:50	0°♅		retrograde	-333 Jun 19 j 11:06	26°♄07'05		
conjunction	-338 Apr 02 j 11:22	7°♅26'41	0°-27'-9	opposition	-333 Jul 19 j 23:30	21°♄00'01	-6°-48'-24	
minimum elong	-338 Apr 02 j 13:09	7°♅29'55	0°27'08	min. Earth dist.	-333 Jul 18 j 15:23	21°♄21'25	0.37477 AU	
	-338 May 04 j 06:02	0°♄		greatest brilliancy	-333 Jul 19 j 15:31	21°♄05'20	-2.9m	
max. Earth dist.	-338 May 12 j 10:46	5°♄40'54	2.51593 AU	direct	-333 Aug 18 j 14:50	16°♄04'07		
asc. node	-338 May 17 j 07:14	9°♄01'09			-333 Oct 08 j 02:25	0°♄		
morning rise	-338 May 30 j 15:25	18°♄05'49		asc. node	-333 Nov 30 j 07:44	0°♅		
	-338 Jun 17 j 10:30	0°♅			-332 Jan 07 j 02:59	23°♅53'32		
	-338 Aug 02 j 20:01	0°♅			-332 Jan 16 j 15:19	0°♅		
	-338 Sep 20 j 16:42	0°♄			-332 Mar 03 j 08:32	0°♄		
	-338 Nov 12 j 23:55	0°♄			-332 Apr 19 j 12:16	0°♅		
retrograde	-337 Feb 07 j 14:35	29°♄00'41		evening set	-332 Jun 06 j 00:53	0°♅		
opposition	-337 Mar 16 j 16:42	20°♄55'05	3°18'49		-332 Jun 22 j 15:45	10°♅29'53		
greatest brilliancy	-337 Mar 17 j 21:09	20°♄28'30	-1.7m	max. Earth dist.	-332 Jul 23 j 08:41	0°♄		
min. Earth dist.	-337 Mar 23 j 16:44	18°♄18'16	0.57878 AU		-332 Jul 28 j 19:49	3°♄29'32	2.66548 AU	
direct	-337 Apr 26 j 05:16	11°♄16'19		conjunction	-332 Aug 07 j 15:19	9°♄47'06	1°09'05	
desc. node	-337 Jun 04 j 03:48	19°♄44'00		minimum elong	-332 Aug 07 j 15:38	9°♄47'37	1°09'05	
	-337 Jun 26 j 13:51	0°♄			-332 Sep 07 j 19:59	0°♄		
	-337 Aug 15 j 03:57	0°♄		morning rise	-332 Sep 21 j 08:39	8°♄52'57		
	-337 Sep 26 j 06:55	0°♄			-332 Oct 23 j 00:46	0°♄		
	-337 Nov 04 j 18:22	0°♄			-332 Dec 05 j 20:23	0°♄		
	-337 Dec 13 j 13:00	0°♄			-331 Jan 17 j 10:21	0°♄		
	-336 Jan 21 j 20:26	0°♅		desc. node	-331 Jan 24 j 02:16	4°♄45'44		
	-336 Mar 02 j 13:17	0°♅			-331 Feb 28 j 03:02	0°♄		
evening set	-336 Mar 29 j 16:08	19°♅16'06			-331 Apr 10 j 16:49	0°♄		
asc. node	-336 Apr 03 j 06:43	22°♅29'05			-331 May 24 j 00:21	0°♅		
	-336 Apr 14 j 03:13	0°♄			-331 Jul 15 j 19:54	0°♅		
conjunction	-336 May 22 j 18:22	26°♄05'52	0°28'30	retrograde	-331 Aug 23 j 07:58	9°♅17'55		
minimum elong	-336 May 22 j 17:09	26°♄03'52	0°28'29	min. Earth dist.	-331 Sep 20 j 14:16	3°♅50'29	0.46354 AU	
	-336 May 28 j 15:51	0°♅		opposition	-331 Sep 28 j 17:46	0°♅59'08	-2°-57'-38	
max. Earth dist.	-336 Jun 11 j 17:50	9°♅14'54	2.61860 AU	greatest brilliancy	-331 Sep 27 j 13:21	1°♅24'07	-2.3m	
morning rise	-336 Jul 11 j 06:30	28°♅21'00		direct	-331 Oct 01 j 14:07	30°♅		
	-336 Jul 13 j 20:18	0°♅		asc. node	-331 Oct 31 j 12:27	24°♅15'03		
	-336 Aug 30 j 06:24	0°♄			-331 Nov 24 j 03:02	27°♅32'48		
	-336 Oct 17 j 19:14	0°♄			-331 Dec 02 j 10:50	0°♅		
	-336 Dec 07 j 08:32	0°♄			-330 Feb 04 j 18:42	0°♄		
	-335 Feb 02 j 18:06	0°♄			-330 Mar 28 j 23:33	0°♅		
retrograde	-335 Apr 02 j 08:17	15°♄45'19			-330 May 17 j 17:49	0°♅		
desc. node	-335 Apr 21 j 03:51	13°♄33'05		evening set	-330 Jul 04 j 23:58	0°♄		
opposition	-335 May 05 j 12:48	9°♄26'27	0°-49'-51		-330 Jul 30 j 05:16	16°♄06'06		
greatest brilliancy	-335 May 05 j 22:29	9°♄18'36	-2.4m	max. Earth dist.	-330 Aug 20 j 13:24	0°♄		
min. Earth dist.	-335 May 13 j 17:41	6°♄47'20	0.45154 AU		-330 Aug 22 j 20:47	1°♄31'08	2.60831 AU	
direct	-335 Jun 10 j 18:45	1°♄45'42		conjunction	-330 Sep 14 j 17:50	16°♄46'05	0°48'44	
	-335 Aug 24 j 08:59	0°♄		minimum elong	-330 Sep 14 j 19:09	16°♄48'17	0°48'43	
	-335 Oct 08 j 01:19	0°♄			-330 Oct 04 j 04:14	0°♄		
	-335 Nov 18 j 10:32	0°♄		morning rise	-330 Nov 01 j 05:18	19°♄34'13		

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 8

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-330 Nov 15 j 20:15	0°♌		opposition	-324 Jan 24 j 17:10	0°♏15'50	4°37'25
desc. node	-330 Dec 12 j 01:11	19°♌03'37		greatest brilliancy	-324 Jan 25 j 00:41	0°♏08'23	-1.2m
	-330 Dec 26 j 19:49	0°♏			-324 Jan 25 j 09:09	30°♏32'28	
	-329 Feb 04 j 14:11	0°♏		min. Earth dist.	-324 Jan 26 j 12:56	29°♏32'28	0.67227 AU
	-329 Mar 15 j 19:41	0°♏		direct	-324 Mar 05 j 22:10	20°♏17'32	
	-329 Apr 24 j 10:41	0°♏			-324 Apr 19 j 06:16	0°♏	
	-329 Jun 04 j 21:08	0°♏			-324 Jun 18 j 06:24	0°♏	
	-329 Jul 21 j 01:43	0°♏		desc. node	-324 Aug 02 j 22:19	28°♏42'41	
retrograde	-329 Oct 07 j 02:09	28°♏40'13			-324 Aug 04 j 20:31	0°♏	
asc. node	-329 Oct 12 j 02:27	28°♏29'37			-324 Sep 16 j 15:34	0°♏	
min. Earth dist.	-329 Nov 09 j 16:56	21°♏07'31	0.58667 AU		-324 Oct 26 j 15:26	0°♏	
opposition	-329 Nov 15 j 11:45	18°♏50'46	1°28'55		-324 Dec 04 j 02:31	0°♏	
greatest brilliancy	-329 Nov 14 j 23:58	19°♏02'24	-1.7m	evening set	-324 Dec 31 j 22:36	21°♏58'25	
direct	-329 Dec 22 j 11:35	10°♏19'45			-323 Jan 11 j 03:08	0°♏	
	-328 Feb 28 j 00:10	0°♏		greatest brilliancy	-323 Jan 22 j 08:30	8°♏48'19	1.2m
	-328 Apr 25 j 00:07	0°♏			-323 Feb 18 j 16:41	0°♏	
	-328 Jun 14 j 15:29	0°♏					
	-328 Jul 31 j 23:36	0°♏		conjunction	-323 Mar 08 j 16:24	13°♏40'35	0°-48'-55
evening set	-328 Sep 07 j 15:37	25°♏13'37		minimum elong	-323 Mar 08 j 19:16	13°♏46'00	0°48'55
	-328 Sep 14 j 13:43	0°♏			-323 Mar 30 j 14:46	0°♏	
max. Earth dist.	-328 Sep 22 j 19:31	5°♏44'24	2.50362 AU	max. Earth dist.	-323 Apr 25 j 12:15	18°♏44'07	2.46446 AU
	-328 Oct 26 j 17:36	0°♏		morning rise	-323 May 10 j 16:01	29°♏25'31	
					-323 May 11 j 11:47	0°♏	
conjunction	-328 Oct 28 j 11:24	1°♏16'20	0°00'21	asc. node	-323 Jun 02 j 23:03	15°♏28'05	
minimum elong	-328 Oct 28 j 11:24	1°♏16'20	0°00'21		-323 Jun 24 j 15:37	0°♏	
behind sun begin	-328 Oct 27 j 13:06	0°♏35'36			-323 Aug 10 j 08:10	0°♏	
behind sun end	-328 Oct 29 j 09:42	1°♏57'07			-323 Sep 29 j 09:12	0°♏	
desc. node	-328 Oct 28 j 23:58	1°♏39'16			-323 Nov 26 j 19:40	0°♏	
	-328 Dec 05 j 22:48	0°♏		retrograde	-322 Jan 21 j 17:12	14°♏17'37	
morning rise	-328 Dec 23 j 14:45	13°♏31'37		opposition	-322 Feb 28 j 19:49	5°♏43'11	4°02'40
	-327 Jan 13 j 20:51	0°♏		greatest brilliancy	-322 Mar 01 j 21:35	5°♏18'29	-1.5m
	-327 Feb 21 j 06:35	0°♏		min. Earth dist.	-322 Mar 06 j 11:26	3°♏33'20	0.61763 AU
	-327 Apr 01 j 00:53	0°♏			-322 Mar 16 j 12:36	30°♏30'00	
	-327 May 11 j 02:44	0°♏		direct	-322 Apr 10 j 23:20	25°♏48'08	
	-327 Jun 22 j 15:58	0°♏			-322 May 08 j 00:11	0°♏	
	-327 Aug 08 j 17:04	0°♏		desc. node	-322 Jun 20 j 21:25	18°♏49'08	
asc. node	-327 Aug 29 j 00:48	11°♏28'29			-322 Jul 10 j 12:31	0°♏	
	-327 Oct 09 j 07:42	0°♏			-322 Aug 25 j 07:19	0°♏	
retrograde	-327 Nov 11 j 10:37	6°♏07'06			-322 Oct 05 j 08:14	0°♏	
	-327 Dec 11 j 23:10	30°♏11'00			-322 Nov 13 j 07:15	0°♏	
min. Earth dist.	-327 Dec 19 j 13:23	27°♏02'49	0.66130 AU		-322 Dec 21 j 16:57	0°♏	
opposition	-327 Dec 21 j 14:35	26°♏13'27	3°47'41		-321 Jan 29 j 16:14	0°♏	
greatest brilliancy	-327 Dec 21 j 04:13	26°♏23'51	-1.3m	evening set	-321 Mar 09 j 00:29	28°♏31'31	
direct	-326 Jan 30 j 08:27	16°♏43'48			-321 Mar 11 j 01:07	0°♏	
	-326 Mar 25 j 02:59	0°♏		asc. node	-321 Apr 20 j 21:21	29°♏00'01	
	-326 May 23 j 13:58	0°♏			-321 Apr 22 j 07:58	0°♏	
	-326 Jul 12 j 05:48	0°♏					
	-326 Aug 26 j 11:20	0°♏		conjunction	-321 May 05 j 14:13	9°♏07'09	0°08'54
desc. node	-326 Sep 15 j 22:36	14°♏20'28		minimum elong	-321 May 05 j 13:45	9°♏06'21	0°08'53
	-326 Oct 07 j 14:15	0°♏		behind sun begin	-321 May 04 j 18:39	8°♏33'45	
evening set	-326 Oct 27 j 13:36	14°♏51'13		behind sun end	-321 May 06 j 08:50	9°♏38'54	
	-326 Nov 16 j 11:31	0°♏		max. Earth dist.	-321 Jun 01 j 19:16	27°♏26'37	2.58433 AU
max. Earth dist.	-326 Nov 30 j 12:47	10°♏51'35	2.38167 AU		-321 Jun 05 j 15:43	0°♏	
	-326 Dec 24 j 23:59	0°♏		morning rise	-321 Jun 26 j 19:30	13°♏52'59	
					-321 Jul 21 j 19:55	0°♏	
conjunction	-326 Dec 27 j 11:12	1°♏56'29	0°-57'-9		-321 Sep 07 j 14:39	0°♏	
minimum elong	-326 Dec 27 j 08:43	1°♏51'36	0°57'08		-321 Oct 27 j 07:46	0°♏	
	-325 Feb 01 j 01:33	0°♏			-321 Dec 20 j 12:54	0°♏	
morning rise	-325 Mar 06 j 15:21	26°♏11'51		retrograde	-320 Mar 09 j 11:54	25°♏43'33	
	-325 Mar 11 j 13:48	0°♏		opposition	-320 Apr 13 j 09:55	18°♏36'23	1°15'25
	-325 Apr 20 j 08:59	0°♏		greatest brilliancy	-320 Apr 14 j 01:50	18°♏22'28	-2.1m
	-325 Jun 01 j 05:22	0°♏		min. Earth dist.	-320 Apr 21 j 18:52	15°♏40'54	0.50425 AU
	-325 Jul 15 j 20:50	0°♏		desc. node	-320 May 07 j 19:43	11°♏14'38	
asc. node	-325 Jul 17 j 00:20	0°♏44'26		direct	-320 May 21 j 22:06	9°♏52'05	
	-325 Sep 02 j 17:27	0°♏			-320 Jul 22 j 18:57	0°♏	
	-325 Nov 01 j 23:48	0°♏			-320 Sep 08 j 02:37	0°♏	
retrograde	-325 Dec 16 j 00:09	9°♏41'26			-320 Oct 19 j 10:53	0°♏	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 9

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-320 Nov 28 j 07:30	0°♊		desc. node	-315 Dec 28 j 17:19	25°♌36'54	
	-319 Jan 07 j 11:01	0°♋			-314 Jan 03 j 16:50	0°♌	
	-319 Feb 17 j 20:51	0°♍			-314 Feb 13 j 00:41	0°♎	
asc. node	-319 Mar 07 j 20:56	12°♍40'01			-314 Mar 24 j 20:26	0°♏	
	-319 Apr 02 j 00:57	0°♐			-314 May 04 j 05:29	0°♑	
evening set	-319 Apr 28 j 08:32	17°♑41'47			-314 Jun 16 j 03:27	0°♒	
	-319 May 16 j 23:39	0°♓			-314 Aug 07 j 06:43	0°♈	
				retrograde	-314 Sep 21 j 04:51	11°♈42'44	
conjunction	-319 Jun 17 j 11:16	20°♓27'31	0°52'07	min. Earth dist.	-314 Oct 22 j 17:29	4°♏55'47	0.54223 AU
minimum elong	-319 Jun 17 j 09:55	20°♓25'20	0°52'07	asc. node	-314 Oct 28 j 18:04	2°♏37'14	
max. Earth dist.	-319 Jun 27 j 07:15	26°♓46'51	2.65585 AU	opposition	-314 Oct 29 j 19:08	2°♏13'08	0°02'57
	-319 Jul 02 j 07:44	0°♐		greatest brilliancy	-312 Feb 07 j 11:28	12°♏20'48	-7.0m
morning rise	-319 Aug 03 j 02:18	20°♐15'45			-314 Nov 04 j 17:38	30°♏	
	-319 Aug 18 j 10:31	0°♑		direct	-314 Dec 04 j 08:19	24°♏16'46	
	-319 Oct 04 j 20:28	0°♒			-313 Jan 05 j 18:00	0°♐	
	-319 Nov 21 j 12:58	0°♓			-313 Mar 12 j 17:33	0°♑	
	-318 Jan 09 j 05:23	0°♌			-313 May 04 j 15:21	0°♒	
	-318 Mar 02 j 14:38	0°♍			-313 Jun 23 j 01:57	0°♓	
desc. node	-318 Mar 25 j 19:04	11°♍25'43			-313 Aug 09 j 00:37	0°♔	
retrograde	-318 May 18 j 07:02	25°♍36'28		evening set	-313 Aug 23 j 05:17	9°♔23'09	
opposition	-318 Jun 17 j 18:14	20°♍30'02	-5°-6'-13	max. Earth dist.	-313 Sep 09 j 21:18	21°♔17'32	2.54936 AU
greatest brilliancy	-318 Jun 18 j 16:06	20°♍15'01	-2.8m		-313 Sep 22 j 13:55	0°♕	
min. Earth dist.	-318 Jun 21 j 20:07	19°♍22'52	0.38665 AU				
direct	-318 Jul 19 j 09:41	14°♍54'39		conjunction	-313 Oct 10 j 18:57	12°♕43'45	0°22'13
	-318 Sep 08 j 22:57	0°♎		minimum elong	-313 Oct 10 j 19:54	12°♕45'25	0°22'11
	-318 Oct 29 j 09:25	0°♏			-313 Nov 03 j 21:28	0°♌	
	-318 Dec 13 j 04:46	0°♐		desc. node	-313 Nov 15 j 16:22	8°♌36'49	
asc. node	-317 Jan 23 j 19:57	28°♐11'20		morning rise	-313 Dec 01 j 14:30	20°♌25'07	
	-317 Jan 26 j 12:34	0°♑			-313 Dec 14 j 08:39	0°♍	
	-317 Mar 12 j 16:25	0°♒			-312 Jan 22 j 13:14	0°♎	
	-317 Apr 27 j 22:42	0°♓			-312 Mar 01 j 04:50	0°♏	
evening set	-317 Jun 08 j 19:09	26°♓42'05			-312 Apr 09 j 04:33	0°♑	
	-317 Jun 13 j 23:44	0°♐			-312 May 19 j 13:39	0°♒	
max. Earth dist.	-317 Jul 20 j 15:20	23°♐18'02	2.67336 AU		-312 Jul 01 j 20:07	0°♓	
					-312 Aug 20 j 13:33	0°♔	
conjunction	-317 Jul 25 j 08:33	26°♐18'28	1°09'30	asc. node	-312 Sep 14 j 17:22	12°♓03'26	
minimum elong	-317 Jul 25 j 08:19	26°♐18'05	1°09'30	retrograde	-312 Oct 28 j 19:57	22°♓31'12	
	-317 Jul 31 j 03:26	0°♑		min. Earth dist.	-312 Dec 04 j 07:23	13°♓59'07	0.63935 AU
morning rise	-317 Sep 08 j 00:19	24°♑59'03		opposition	-312 Dec 07 j 20:30	12°♓33'49	3°06'04
	-317 Sep 15 j 17:49	0°♒		greatest brilliancy	-312 Dec 07 j 06:18	12°♓48'04	-1.4m
	-317 Oct 31 j 09:07	0°♓		direct	-311 Jan 15 j 15:58	3°♓23'02	
	-317 Dec 14 j 23:16	0°♌			-311 Apr 08 j 02:29	0°♔	
	-316 Jan 27 j 16:43	0°♍			-311 Jun 01 j 09:38	0°♕	
desc. node	-316 Feb 10 j 18:57	9°♍45'25			-311 Jul 19 j 21:10	0°♖	
	-316 Mar 11 j 00:03	0°♎			-311 Sep 02 j 18:48	0°♗	
	-316 Apr 24 j 04:15	0°♏		desc. node	-311 Oct 02 j 16:04	21°♗07'01	
	-316 Jun 13 j 13:46	0°♐		evening set	-311 Oct 06 j 08:59	23°♗47'50	
retrograde	-316 Aug 01 j 04:29	13°♐59'31			-311 Oct 14 j 21:07	0°♘	
min. Earth dist.	-316 Aug 27 j 23:38	9°♐16'43	0.41546 AU	max. Earth dist.	-311 Oct 23 j 16:37	6°♘29'42	2.42544 AU
greatest brilliancy	-316 Sep 02 j 15:26	7°♐29'39	-2.6m		-311 Nov 23 j 20:41	0°♙	
opposition	-316 Sep 04 j 06:13	6°♐58'50	-5°-9'-35				
direct	-316 Oct 05 j 05:08	1°♐10'16		conjunction	-311 Dec 01 j 15:36	5°♙59'06	0°-37'-24
asc. node	-316 Dec 10 j 18:29	22°♐01'50		minimum elong	-311 Dec 01 j 13:22	5°♙54'48	0°37'24
	-316 Dec 25 j 23:33	0°♑			-310 Jan 01 j 11:57	0°♚	
	-315 Feb 16 j 00:50	0°♒		morning rise	-310 Feb 04 j 14:17	26°♚48'57	
	-315 Apr 06 j 11:38	0°♓			-310 Feb 08 j 15:33	0°♔	
	-315 May 25 j 03:10	0°♐			-310 Mar 19 j 04:49	0°♑	
	-315 Jul 11 j 22:10	0°♓			-310 Apr 28 j 00:41	0°♒	
evening set	-315 Jul 15 j 12:54	2°♓17'55			-310 Jun 08 j 23:56	0°♓	
max. Earth dist.	-315 Aug 12 j 19:47	20°♓29'02	2.63680 AU		-310 Jul 24 j 03:51	0°♔	
	-315 Aug 27 j 09:26	0°♔		asc. node	-310 Aug 02 j 15:03	5°♓56'04	
					-310 Sep 13 j 02:25	0°♕	
conjunction	-315 Aug 30 j 12:00	2°♔02'36	0°59'58	retrograde	-310 Dec 02 j 12:02	26°♕58'06	
minimum elong	-315 Aug 30 j 13:04	2°♔04'22	0°59'58	opposition	-309 Jan 11 j 12:19	17°♕18'56	4°27'29
	-315 Oct 11 j 04:26	0°♕		greatest brilliancy	-309 Jan 11 j 12:02	17°♕19'14	-1.2m
morning rise	-315 Oct 15 j 09:29	2°♕52'59		min. Earth dist.	-309 Jan 11 j 19:37	17°♕11'39	0.67586 AU
	-315 Nov 23 j 05:15	0°♌		direct	-309 Feb 21 j 07:12	7°♕28'44	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 10

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-309 May 05 j 22:13	0°♈		evening set	-304 Apr 09 j 23:05	0°♄24'29	
	-309 Jun 28 j 13:45	0°♊			-304 Apr 09 j 08:48	0°♄	
	-309 Aug 13 j 22:13	0°♊			-304 May 23 j 23:56	0°♊	
desc. node	-309 Aug 20 j 14:49	4°♊34'56					
	-309 Sep 25 j 08:45	0°♊		conjunction	-304 Jun 01 j 10:46	5°♊33'23	0°38'16
	-309 Nov 04 j 06:38	0°♊		minimum elong	-304 Jun 01 j 09:23	5°♊31'07	0°38'15
evening set	-309 Dec 05 j 04:22	24°♊03'34		max. Earth dist.	-304 Jun 17 j 14:36	16°♊05'17	2.63418 AU
	-309 Dec 12 j 17:28	0°♊			-304 Jul 09 j 04:38	0°♊	
	-308 Jan 19 j 17:28	0°♊		morning rise	-304 Jul 19 j 18:12	6°♊45'20	
					-304 Aug 25 j 10:50	0°♊	
conjunction	-308 Feb 09 j 22:58	16°♊38'11	-1°-3'-16		-304 Oct 12 j 11:47	0°♊	
minimum elong	-308 Feb 10 j 00:37	16°♊41'23	1°03'16		-304 Nov 30 j 17:35	0°♊	
	-308 Feb 27 j 05:20	0°♊			-303 Jan 22 j 11:23	0°♊	
max. Earth dist.	-308 Mar 31 j 13:17	25°♊12'16	2.41066 AU	desc. node	-303 Apr 11 j 11:02	28°♊54'15	
	-308 Apr 07 j 00:49	0°♊		retrograde	-303 Apr 17 j 14:35	29°♊08'03	
morning rise	-308 Apr 17 j 15:15	7°♊45'49		opposition	-303 May 19 j 19:26	23°♊17'49	-2°-18'-57
	-308 May 18 j 19:32	0°♊		greatest brilliancy	-303 May 20 j 16:58	23°♊01'18	-2.5m
asc. node	-308 Jun 19 j 14:27	21°♊44'59		min. Earth dist.	-303 May 27 j 06:07	21°♊01'45	0.42462 AU
	-308 Jul 02 j 00:39	0°♊		direct	-303 Jun 23 j 11:11	16°♊21'27	
	-308 Aug 18 j 05:03	0°♊			-303 Aug 10 j 20:04	0°♊	
	-308 Oct 09 j 05:12	0°♊			-303 Sep 29 j 16:52	0°♊	
	-308 Dec 27 j 03:12	0°♊			-303 Nov 11 j 16:09	0°♊	
retrograde	-307 Jan 06 j 08:40	0°♊37'07			-303 Dec 23 j 16:11	0°♊	
	-307 Jan 16 j 06:23	30°♊			-302 Feb 04 j 09:55	0°♊	
opposition	-307 Feb 14 j 05:52	21°♊39'32	4°27'34	asc. node	-302 Feb 09 j 11:17	3°♊29'27	
greatest brilliancy	-307 Feb 15 j 01:31	21°♊20'23	-1.3m		-302 Mar 20 j 13:24	0°♊	
min. Earth dist.	-307 Feb 18 j 10:17	20°♊01'43	0.64668 AU		-302 May 05 j 04:19	0°♊	
direct	-307 Mar 27 j 15:00	11°♊38'12		evening set	-302 May 24 j 09:51	12°♊24'57	
	-307 May 29 j 16:55	0°♊			-302 Jun 20 j 20:53	0°♊	
desc. node	-307 Jul 07 j 13:01	21°♊30'31					
	-307 Jul 21 j 03:28	0°♊		conjunction	-302 Jul 10 j 23:23	12°♊49'00	1°05'54
	-307 Sep 03 j 05:54	0°♊		minimum elong	-302 Jul 10 j 22:37	12°♊47'46	1°05'55
	-307 Oct 13 j 17:14	0°♊		max. Earth dist.	-302 Jul 11 j 15:33	13°♊14'44	2.67304 AU
	-307 Nov 21 j 09:41	0°♊			-302 Aug 06 j 22:38	0°♊	
	-307 Dec 29 j 14:18	0°♊		morning rise	-302 Aug 25 j 00:42	11°♊33'06	
	-306 Feb 06 j 08:21	0°♊			-302 Sep 22 j 18:20	0°♊	
evening set	-306 Feb 12 j 13:49	4°♊44'13			-302 Nov 07 j 23:45	0°♊	
	-306 Mar 18 j 11:33	0°♊			-302 Dec 23 j 15:54	0°♊	
					-301 Feb 07 j 04:24	0°♊	
conjunction	-306 Apr 15 j 04:07	19°♊55'09	0°-13'-44	desc. node	-301 Feb 27 j 10:26	13°♊14'00	
minimum elong	-306 Apr 15 j 04:59	19°♊56'41	0°13'43		-301 Mar 25 j 15:07	0°♊	
behind sun begin	-306 Apr 14 j 16:35	19°♊34'45			-301 May 16 j 22:01	0°♊	
behind sun end	-306 Apr 15 j 17:23	20°♊18'36		retrograde	-301 Jul 06 j 16:54	14°♊22'19	
	-306 Apr 29 j 12:54	0°♊		min. Earth dist.	-301 Aug 02 j 23:12	9°♊54'11	0.38226 AU
asc. node	-306 May 07 j 14:30	5°♊35'11		greatest brilliancy	-301 Aug 06 j 00:41	9°♊03'21	-2.8m
max. Earth dist.	-306 May 20 j 10:18	14°♊22'01	2.54205 AU	opposition	-301 Aug 07 j 02:14	8°♊45'35	-6°-44'-12
morning rise	-306 Jun 09 j 23:44	28°♊11'14		direct	-301 Sep 05 j 18:38	3°♊42'32	
	-306 Jun 12 j 17:13	0°♊			-301 Nov 19 j 23:31	0°♊	
	-306 Jul 28 j 23:06	0°♊		asc. node	-301 Dec 28 j 10:39	22°♊31'10	
	-306 Sep 15 j 07:22	0°♊			-300 Jan 09 j 15:16	0°♊	
	-306 Nov 05 j 21:14	0°♊			-300 Feb 26 j 15:25	0°♊	
	-305 Jan 07 j 19:55	0°♊			-300 Apr 14 j 10:34	0°♊	
retrograde	-305 Feb 18 j 01:46	8°♊26'26			-300 Jun 01 j 07:12	0°♊	
opposition	-305 Mar 26 j 11:09	0°♊39'24	2°42'21	evening set	-300 Jun 30 j 23:55	18°♊42'49	
greatest brilliancy	-305 Mar 27 j 14:07	0°♊14'38	-1.8m		-300 Jul 18 j 18:26	0°♊	
	-305 Mar 28 j 06:01	30°♊		max. Earth dist.	-300 Aug 03 j 05:50	9°♊54'03	2.65763 AU
min. Earth dist.	-305 Apr 03 j 02:05	27°♊51'42	0.55405 AU				
direct	-305 May 05 j 10:23	21°♊14'46		conjunction	-300 Aug 15 j 20:12	18°♊01'28	1°06'56
desc. node	-305 May 25 j 12:00	23°♊45'52		minimum elong	-300 Aug 15 j 20:50	18°♊02'29	1°06'57
	-305 Jun 13 j 16:26	0°♊			-300 Sep 03 j 05:45	0°♊	
	-305 Aug 07 j 22:39	0°♊		morning rise	-300 Sep 29 j 19:41	17°♊34'33	
	-305 Sep 20 j 05:01	0°♊			-300 Oct 18 j 06:59	0°♊	
	-305 Oct 30 j 03:55	0°♊			-300 Nov 30 j 19:24	0°♊	
	-305 Dec 08 j 05:14	0°♊			-299 Jan 11 j 22:38	0°♊	
	-304 Jan 16 j 17:55	0°♊		desc. node	-299 Jan 14 j 10:31	1°♊48'10	
	-304 Feb 26 j 15:13	0°♊			-299 Feb 22 j 01:09	0°♊	
asc. node	-304 Mar 24 j 12:43	19°♊02'26			-299 Apr 03 j 19:03	0°♊	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 11

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-299 May 15 j 13:46	0° H			-294 Mar 11 j 11:31	0° E		
	-299 Jul 01 j 03:31	0° Y			-294 May 17 j 04:33	0° O		
retrograde	-299 Sep 03 j 13:06	22° Y 17'43			-294 Jul 06 j 23:42	0° M		
min. Earth dist.	-299 Oct 02 j 21:39	16° Y 21'38	0.49234 AU		-294 Aug 21 j 14:14	0° E		
opposition	-299 Oct 10 j 21:31	13° Y 26'33	-1°-45'-26	desc. node	-294 Sep 06 j 06:49	10° E 54'37		
greatest brilliancy	-299 Oct 10 j 03:52	13° Y 42'42	-2.2m		-294 Oct 02 j 19:59	0° M		
direct	-299 Nov 13 j 18:12	6° Y 13'49		evening set	-294 Nov 09 j 17:07	28° M 27'03		
asc. node	-299 Nov 14 j 09:07	6° Y 13'58			-294 Nov 11 j 17:33	0° J		
	-298 Jan 27 j 00:49	0° B			-294 Dec 20 j 05:21	0° E		
	-298 Mar 22 j 22:56	0° II						
	-298 May 12 j 14:51	0° E		conjunction	-293 Jan 12 j 04:47	18° E 07'52	-1°-3'-38	
	-298 Jun 30 j 05:57	0° O		minimum elong	-293 Jan 12 j 03:22	18° E 05'03	1°03'39	
evening set	-298 Aug 07 j 18:24	24° O 38'51		max. Earth dist.	-293 Jan 23 j 21:48	27° E 22'11	2.37271 AU	
	-298 Aug 15 j 22:44	0° M			-293 Jan 27 j 05:55	0° \approx		
max. Earth dist.	-298 Aug 29 j 04:06	8° M 44'42	2.58946 AU		-293 Mar 06 j 17:23	0° H		
				morning rise	-293 Mar 23 j 01:07	12° H 27'52		
conjunction	-298 Sep 23 j 19:46	26° M 03'49	0°40'14		-293 Apr 15 j 11:51	0° Y		
minimum elong	-298 Sep 23 j 21:04	26° M 06'03	0°40'13		-293 May 27 j 06:16	0° B		
	-298 Sep 29 j 13:23	0° E		asc. node	-293 Jul 07 j 06:42	27° B 47'09		
morning rise	-298 Nov 11 j 12:47	0° M 18'06			-293 Jul 10 j 15:53	0° II		
	-298 Nov 11 j 02:45	0° M			-293 Aug 27 j 16:24	0° E		
desc. node	-298 Dec 02 j 09:09	15° M 29'40			-293 Oct 22 j 09:48	0° O		
	-298 Dec 21 j 22:00	0° J		retrograde	-293 Dec 23 j 23:44	17° O 31'49		
	-297 Jan 30 j 11:15	0° E		opposition	-292 Feb 01 j 10:41	8° O 15'18	4°37'27	
	-297 Mar 10 j 10:53	0° \approx		greatest brilliancy	-292 Feb 01 j 22:39	8° O 03'30	-1.3m	
	-297 Apr 18 j 18:39	0° H		min. Earth dist.	-292 Feb 04 j 02:36	7° O 12'15	0.66593 AU	
	-297 May 29 j 16:08	0° Y			-292 Feb 26 j 06:28	30° R E		
	-297 Jul 13 j 07:13	0° B		direct	-292 Mar 13 j 18:29	28° E 14'29		
	-297 Sep 08 j 07:02	0° II			-292 Mar 31 j 05:04	0° O		
asc. node	-297 Oct 02 j 08:05	6° II 52'36			-292 Jun 11 j 11:23	0° M		
retrograde	-297 Oct 15 j 15:56	8° II 01'49		desc. node	-292 Jul 24 j 05:50	26° M 00'03		
min. Earth dist.	-297 Nov 19 j 08:02	0° II 06'23	0.60786 AU		-292 Jul 30 j 08:15	0° E		
	-297 Nov 19 j 14:30	30° R B			-292 Sep 11 j 13:15	0° M		
opposition	-297 Nov 24 j 08:10	28° B 06'56	2°09'47		-292 Oct 21 j 17:00	0° J		
greatest brilliancy	-297 Nov 23 j 17:47	28° B 21'15	-1.6m	greatest brilliancy	-292 Nov 17 j 10:49	20° J 44'32	1.2m	
direct	-296 Jan 01 j 00:33	19° B 20'00			-292 Nov 29 j 05:49	0° E		
	-296 Feb 16 j 23:23	0° II			-291 Jan 06 j 07:15	0° \approx		
	-296 Apr 18 j 18:42	0° E		evening set	-291 Jan 16 j 16:41	8° \approx 09'00		
	-296 Jun 09 j 11:23	0° O			-291 Feb 13 j 21:28	0° H		
	-296 Jul 27 j 04:39	0° M						
	-296 Sep 09 j 21:41	0° E		conjunction	-291 Mar 23 j 01:47	27° H 57'39	0°-36'-57	
evening set	-296 Sep 17 j 14:04	5° E 20'39		minimum elong	-291 Mar 23 j 04:12	28° H 02'07	0°36'56	
max. Earth dist.	-296 Oct 02 j 06:45	15° E 43'18	2.47620 AU		-291 Mar 25 j 20:18	0° Y		
desc. node	-296 Oct 19 j 07:37	28° E 00'01		max. Earth dist.	-291 May 05 j 17:40	29° Y 18'20	2.49338 AU	
	-296 Oct 22 j 01:22	0° M			-291 May 06 j 17:32	0° B		
				morning rise	-291 May 22 j 08:08	10° B 47'34		
conjunction	-296 Nov 09 j 01:15	13° M 17'24	0°-13'-22	asc. node	-291 May 24 j 05:28	12° B 05'08		
minimum elong	-296 Nov 09 j 00:29	13° M 15'58	0°13'22		-291 Jun 19 j 20:15	0° II		
behind sun begin	-296 Nov 08 j 10:52	12° M 50'36			-291 Aug 05 j 06:56	0° E		
behind sun end	-296 Nov 09 j 14:06	13° M 41'22			-291 Sep 23 j 12:38	0° O		
	-296 Dec 01 j 04:49	0° J			-291 Nov 17 j 09:19	0° M		
morning rise	-295 Jan 07 j 03:42	28° J 32'20		retrograde	-290 Jan 31 j 03:57	23° M 00'40		
	-295 Jan 09 j 00:37	0° E		opposition	-290 Mar 09 j 17:21	14° M 41'31	3°39'35	
	-295 Feb 16 j 07:57	0° \approx		greatest brilliancy	-290 Mar 10 j 21:06	14° M 15'14	-1.6m	
	-295 Mar 26 j 23:50	0° H		min. Earth dist.	-290 Mar 16 j 03:07	12° M 16'02	0.59719 AU	
greatest brilliancy	-295 Apr 01 j 02:14	3° H 53'58	1.2m	direct	-290 Apr 19 j 13:19	4° M 53'56		
	-295 May 05 j 22:20	0° Y		desc. node	-290 Jun 11 j 03:45	19° M 02'53		
	-295 Jun 17 j 03:49	0° B			-290 Jul 02 j 10:28	0° E		
	-295 Aug 02 j 05:43	0° II			-290 Aug 19 j 03:04	0° M		
asc. node	-295 Aug 19 j 07:52	10° II 09'56			-290 Sep 29 j 18:19	0° J		
	-295 Sep 26 j 12:50	0° E			-290 Nov 08 j 00:20	0° E		
retrograde	-295 Nov 19 j 04:04	14° E 07'11			-290 Dec 16 j 14:28	0° \approx		
min. Earth dist.	-295 Dec 28 j 02:06	4° E 46'59	0.66919 AU		-289 Jan 24 j 17:21	0° H		
opposition	-295 Dec 29 j 07:19	4° E 17'41	4°05'55		-289 Mar 06 j 05:27	0° Y		
greatest brilliancy	-295 Dec 29 j 00:03	4° E 24'57	-1.3m	evening set	-289 Mar 21 j 14:25	11° Y 02'50		
	-294 Jan 09 j 11:43	30° R II		asc. node	-289 Apr 11 j 05:05	25° Y 33'33		
direct	-294 Feb 07 j 11:00	24° II 39'35			-289 Apr 17 j 14:44	0° B		

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 12

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

conjunction	-289 May 16 j 03:55	19°♄26'44	0°20'36	retrograde	-284 Aug 14 j 04:02	29°♄13'57	
minimum elong	-289 May 16 j 02:57	19°♄25'06	0°20'36	min. Earth dist.	-284 Sep 10 j 14:38	24°♄08'58	0.44093 AU
	-289 May 31 j 23:55	0°♄		greatest brilliancy	-284 Sep 17 j 03:57	21°♄57'01	-2.4m
max. Earth dist.	-289 Jun 08 j 05:16	4°♄46'05	2.60422 AU	opposition	-284 Sep 18 j 14:48	21°♄27'39	-3°-55'-3
morning rise	-289 Jul 05 j 18:43	22°♄42'45		direct	-284 Oct 20 j 12:55	15°♄08'17	
	-289 Jul 17 j 03:02	0°♄		asc. node	-284 Dec 01 j 01:26	24°♄24'29	
	-289 Sep 02 j 15:46	0°♄			-284 Dec 14 j 05:52	0°♄	
	-289 Oct 21 j 14:54	0°♄			-283 Feb 09 j 02:56	0°♄	
	-289 Dec 12 j 09:54	0°♄			-283 Mar 31 j 22:57	0°♄	
	-288 Feb 14 j 07:38	0°♄			-283 May 20 j 04:40	0°♄	
retrograde	-288 Mar 22 j 11:27	7°♄06'22			-283 Jul 07 j 06:08	0°♄	
opposition	-288 Apr 25 j 11:19	0°♄24'54	0°08'52	evening set	-283 Jul 23 j 22:06	10°♄36'47	
greatest brilliancy	-289 Dec 09 j 15:45	28°♄28'45	-3.6m	max. Earth dist.	-283 Aug 18 j 15:09	27°♄15'31	2.62211 AU
	-288 Apr 26 j 16:48	30°♄			-283 Aug 22 j 19:30	0°♄	
desc. node	-288 Apr 28 j 03:41	29°♄30'24					
min. Earth dist.	-288 May 03 j 21:57	27°♄34'43	0.47491 AU	conjunction	-283 Sep 08 j 02:58	10°♄47'37	0°53'58
direct	-288 Jun 01 j 19:31	22°♄12'48		minimum elong	-283 Sep 08 j 04:13	10°♄49'41	0°53'58
	-288 Jul 07 j 13:01	0°♄			-283 Oct 06 j 13:02	0°♄	
	-288 Aug 30 j 20:46	0°♄		morning rise	-283 Oct 24 j 18:53	12°♄36'51	
	-288 Oct 12 j 17:33	0°♄			-283 Nov 18 j 09:47	0°♄	
	-288 Nov 22 j 07:40	0°♄		desc. node	-283 Dec 19 j 01:09	22°♄11'59	
	-287 Jan 01 j 22:36	0°♄			-283 Dec 29 j 15:03	0°♄	
	-287 Feb 12 j 17:12	0°♄			-282 Feb 07 j 15:30	0°♄	
asc. node	-287 Feb 26 j 03:07	9°♄23'45			-282 Mar 19 j 02:38	0°♄	
	-287 Mar 28 j 03:45	0°♄			-282 Apr 27 j 23:48	0°♄	
evening set	-287 May 08 j 03:53	27°♄17'40			-282 Jun 08 j 21:08	0°♄	
	-287 May 12 j 07:03	0°♄			-282 Jul 26 j 14:48	0°♄	
				retrograde	-282 Sep 30 j 11:37	22°♄04'18	
conjunction	-287 Jun 26 j 04:55	29°♄01'57	0°58'19	asc. node	-282 Oct 19 j 01:02	19°♄34'52	
minimum elong	-287 Jun 26 j 03:43	29°♄00'02	0°58'19	min. Earth dist.	-282 Nov 02 j 04:23	14°♄50'55	0.56767 AU
	-287 Jun 27 j 17:11	0°♄		opposition	-282 Nov 08 j 13:06	12°♄21'50	0°55'18
max. Earth dist.	-287 Jul 02 j 17:06	3°♄11'46	2.66438 AU	greatest brilliancy	-282 Nov 08 j 04:42	12°♄30'03	-1.8m
morning rise	-287 Aug 11 j 02:54	28°♄18'17		direct	-282 Dec 14 j 21:31	4°♄05'15	
	-287 Aug 13 j 18:53	0°♄			-281 Mar 04 j 23:48	0°♄	
	-287 Sep 29 j 22:50	0°♄			-281 Apr 28 j 23:50	0°♄	
	-287 Nov 16 j 00:29	0°♄			-281 Jun 18 j 02:46	0°♄	
	-286 Jan 02 j 08:31	0°♄			-281 Aug 04 j 07:53	0°♄	
	-286 Feb 20 j 04:34	0°♄		evening set	-281 Sep 01 j 10:49	18°♄42'34	
desc. node	-286 Mar 16 j 03:42	13°♄48'15			-281 Sep 17 j 22:51	0°♄	
	-286 Apr 17 j 01:06	0°♄		max. Earth dist.	-281 Sep 17 j 14:51	29°♄46'11	2.52483 AU
retrograde	-286 Jun 05 j 09:32	12°♄48'46					
opposition	-286 Jul 05 j 15:43	7°♄50'05	-6°-19'-1	conjunction	-281 Oct 21 j 03:33	23°♄25'30	0°10'05
greatest brilliancy	-286 Jul 05 j 23:25	7°♄44'57	-2.9m	minimum elong	-281 Oct 21 j 04:02	23°♄26'22	0°10'04
min. Earth dist.	-286 Jul 06 j 19:52	7°♄31'21	0.37607 AU	behind sun begin	-281 Oct 20 j 10:39	22°♄55'07	
direct	-286 Aug 04 j 22:18	2°♄44'37		behind sun end	-281 Oct 21 j 21:25	23°♄57'39	
	-286 Oct 18 j 13:50	0°♄			-281 Oct 30 j 05:34	0°♄	
	-286 Dec 05 j 16:30	0°♄		desc. node	-281 Nov 06 j 00:12	4°♄57'01	
asc. node	-285 Jan 14 j 01:25	25°♄49'31			-281 Dec 09 j 14:10	0°♄	
	-285 Jan 20 j 09:45	0°♄		morning rise	-281 Dec 14 j 04:10	3°♄28'45	
	-285 Mar 07 j 07:35	0°♄			-280 Jan 17 j 15:31	0°♄	
	-285 Apr 23 j 00:34	0°♄			-280 Feb 25 j 03:38	0°♄	
	-285 Jun 09 j 07:27	0°♄			-280 Apr 03 j 23:27	0°♄	
evening set	-285 Jun 17 j 08:56	5°♄06'15			-280 May 14 j 02:57	0°♄	
max. Earth dist.	-285 Jul 25 j 22:32	29°♄36'16	2.67011 AU		-280 Jun 25 j 20:23	0°♄	
	-285 Jul 26 j 13:24	0°♄			-280 Aug 12 j 15:44	0°♄	
				asc. node	-280 Sep 04 j 23:17	12°♄31'34	
conjunction	-285 Aug 02 j 13:08	4°♄28'00	1°09'44		-280 Oct 24 j 22:35	0°♄	
minimum elong	-285 Aug 02 j 13:13	4°♄28'08	1°09'44	retrograde	-280 Nov 05 j 17:41	0°♄52'20	
	-285 Sep 11 j 02:30	0°♄			-280 Nov 17 j 01:11	30°♄	
morning rise	-285 Sep 16 j 04:00	3°♄18'21		min. Earth dist.	-280 Dec 13 j 02:56	22°♄01'48	0.65269 AU
	-285 Oct 26 j 12:14	0°♄		opposition	-280 Dec 15 j 20:07	20°♄56'19	3°32'04
	-285 Dec 09 j 16:15	0°♄		greatest brilliancy	-280 Dec 15 j 07:39	21°♄08'51	-1.3m
	-284 Jan 21 j 17:45	0°♄		direct	-279 Jan 24 j 03:59	11°♄34'33	
desc. node	-284 Feb 01 j 02:22	7°♄18'27			-279 Mar 30 j 16:45	0°♄	
	-284 Mar 04 j 01:36	0°♄			-279 May 26 j 15:42	0°♄	
	-284 Apr 15 j 12:32	0°♄			-279 Jul 14 j 20:15	0°♄	
	-284 May 30 j 16:46	0°♄			-279 Aug 28 j 23:42	0°♄	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 13

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

desc. node	-279 Sep 22 j 22:50	17°♄32'23		behind sun end	-274 Apr 28 j 01:45	2°♄16'48	
	-279 Oct 10 j 03:42	0°♌		asc. node	-274 Apr 27 j 19:56	2°♄06'45	
evening set	-279 Oct 18 j 01:36	5°♌49'47		max. Earth dist.	-274 May 27 j 18:28	22°♄30'52	2.56642 AU
max. Earth dist.	-279 Nov 10 j 05:10	23°♌12'06	2.39937 AU		-274 Jun 07 j 23:48	0°♐	
	-279 Nov 19 j 02:53	0°♏		morning rise	-274 Jun 19 j 19:12	7°♐47'33	
					-274 Jul 24 j 03:21	0°♑	
conjunction	-279 Dec 15 j 19:51	20°♏41'13	0°-49'-36		-274 Sep 10 j 02:27	0°♒	
minimum elong	-279 Dec 15 j 17:12	20°♏36'02	0°49'36		-274 Oct 30 j 11:01	0°♓	
	-279 Dec 27 j 17:10	0°♑			-274 Dec 26 j 03:37	0°♈	
	-278 Feb 03 j 19:34	0°♒		retrograde	-273 Mar 01 j 07:30	18°♈26'49	
morning rise	-278 Feb 21 j 11:53	13°♒51'23		opposition	-273 Apr 05 j 21:57	11°♈00'38	1°56'18
	-278 Mar 14 j 07:35	0°♓		greatest brilliancy	-273 Apr 06 j 20:05	10°♈40'45	-1.9m
	-278 Apr 23 j 01:57	0°♈		min. Earth dist.	-273 Apr 14 j 00:10	8°♈06'41	0.52723 AU
	-278 Jun 03 j 21:43	0°♉		direct	-273 May 15 j 03:14	1°♈55'42	
	-278 Jul 18 j 15:49	0°♐		desc. node	-273 May 15 j 19:42	1°♈55'54	
asc. node	-278 Jul 23 j 22:30	3°♐22'40			-273 Jul 30 j 11:21	0°♌	
	-278 Sep 06 j 02:51	0°♑			-273 Sep 13 j 15:07	0°♏	
	-278 Nov 10 j 19:13	0°♒			-273 Oct 24 j 06:45	0°♑	
retrograde	-278 Dec 10 j 06:00	4°♒44'06			-273 Dec 02 j 17:32	0°♒	
	-277 Jan 06 j 07:37	30°♒♑			-272 Jan 11 j 12:52	0°♓	
opposition	-277 Jan 19 j 02:13	25°♑12'05	4°34'35		-272 Feb 21 j 15:35	0°♈	
greatest brilliancy	-277 Jan 19 j 06:13	25°♑08'06	-1.2m	asc. node	-272 Mar 14 j 18:59	15°♈38'52	
min. Earth dist.	-277 Jan 20 j 05:43	24°♑44'42	0.67510 AU		-272 Apr 04 j 13:23	0°♉	
direct	-277 Mar 01 j 02:43	15°♑16'49		evening set	-272 Apr 20 j 16:05	10°♉56'08	
	-277 Apr 26 j 19:47	0°♒			-272 May 19 j 07:28	0°♐	
	-277 Jun 22 j 15:22	0°♓					
	-277 Aug 08 j 17:24	0°♈		conjunction	-272 Jun 10 j 18:19	14°♐40'03	0°46'48
desc. node	-277 Aug 10 j 22:01	1°♈28'51		minimum elong	-272 Jun 10 j 16:54	14°♐37'46	0°46'47
	-277 Sep 20 j 09:59	0°♌		max. Earth dist.	-272 Jun 23 j 08:47	22°♐48'51	2.64723 AU
	-277 Oct 30 j 09:45	0°♏			-272 Jul 04 j 13:03	0°♑	
	-277 Dec 07 j 21:10	0°♑		morning rise	-272 Jul 28 j 01:23	15°♑00'39	
evening set	-277 Dec 20 j 17:01	10°♑07'26			-272 Aug 20 j 16:48	0°♒	
	-276 Jan 14 j 21:21	0°♒			-272 Oct 07 j 08:35	0°♓	
	-276 Feb 22 j 09:27	0°♓			-272 Nov 24 j 15:12	0°♈	
					-271 Jan 13 j 17:05	0°♌	
conjunction	-276 Feb 25 j 22:05	2°♓42'17	0°-56'-26		-271 Mar 11 j 22:55	0°♏	
minimum elong	-276 Feb 26 j 00:47	2°♓47'29	0°56'26	desc. node	-271 Apr 01 j 18:53	8°♏05'23	
	-276 Apr 02 j 05:24	0°♈		retrograde	-271 May 04 j 10:57	13°♏54'05	
max. Earth dist.	-276 Apr 16 j 01:16	10°♈06'16	2.44031 AU	opposition	-271 Jun 04 j 13:12	8°♏31'08	-3°-55'-6
morning rise	-276 May 01 j 02:40	20°♈54'42		greatest brilliancy	-271 Jun 05 j 15:20	8°♏12'21	-2.7m
	-276 May 13 j 23:56	0°♉		min. Earth dist.	-271 Jun 10 j 11:21	6°♏49'15	0.40115 AU
asc. node	-276 Jun 09 j 21:39	18°♉29'52		direct	-271 Jul 07 j 13:02	2°♏21'31	
	-276 Jun 27 j 02:38	0°♐			-271 Sep 19 j 03:32	0°♑	
	-276 Aug 12 j 21:52	0°♑			-271 Nov 04 j 01:17	0°♒	
	-276 Oct 02 j 13:44	0°♒			-271 Dec 17 j 08:09	0°♓	
	-276 Dec 03 j 19:47	0°♓			-270 Jan 29 j 19:52	0°♈	
retrograde	-275 Jan 15 j 00:13	8°♓48'28		asc. node	-270 Jan 30 j 18:14	0°♈38'08	
opposition	-275 Feb 22 j 11:23	0°♓03'06	4°14'47		-270 Mar 15 j 10:50	0°♉	
	-275 Feb 22 j 14:36	30°♓♒			-270 Apr 30 j 09:02	0°♐	
greatest brilliancy	-275 Feb 23 j 10:39	29°♒40'36	-1.4m	evening set	-270 Jun 02 j 07:43	21°♐07'57	
min. Earth dist.	-275 Feb 27 j 11:16	28°♒07'14	0.63188 AU		-270 Jun 16 j 05:30	0°♑	
direct	-275 Apr 04 j 17:58	20°♒04'04		max. Earth dist.	-270 Jul 16 j 22:42	19°♑32'56	2.67425 AU
	-275 May 18 j 12:26	0°♓					
desc. node	-275 Jun 27 j 21:19	20°♓00'56		conjunction	-270 Jul 19 j 06:37	21°♑01'57	1°08'28
	-275 Jul 14 j 15:26	0°♈		minimum elong	-270 Jul 19 j 06:08	21°♑01'12	1°08'28
	-275 Aug 28 j 16:23	0°♌			-270 Aug 02 j 08:14	0°♒	
	-275 Oct 08 j 11:37	0°♏		morning rise	-270 Sep 02 j 01:03	19°♒40'13	
	-275 Nov 16 j 07:51	0°♑			-270 Sep 18 j 01:08	0°♓	
	-275 Dec 24 j 14:47	0°♒			-270 Nov 02 j 22:43	0°♈	
	-274 Feb 01 j 10:43	0°♓			-270 Dec 17 j 23:57	0°♌	
evening set	-274 Feb 26 j 18:33	19°♓02'37			-269 Jan 31 j 10:10	0°♏	
	-274 Mar 13 j 15:53	0°♈		desc. node	-269 Feb 17 j 18:44	11°♏45'35	
	-274 Apr 24 j 18:52	0°♉			-269 Mar 16 j 20:03	0°♑	
					-269 May 02 j 04:10	0°♒	
conjunction	-274 Apr 27 j 02:29	1°♉36'32	0°00'-26		-269 Jul 05 j 09:51	0°♓	
minimum elong	-274 Apr 27 j 02:28	1°♉36'29	0°00'26	retrograde	-269 Jul 22 j 05:26	1°♉56'29	
behind sun begin	-274 Apr 26 j 03:11	0°♉56'08			-269 Aug 08 j 01:14	30°♒♑	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 14

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

min. Earth dist.	-269 Aug 17 j 21:46	27° \approx 25'57	0.39785 AU	evening set	-264 Sep 27 j 23:54	15° \approx 58'47	
greatest brilliancy	-269 Aug 22 j 13:56	26° \approx 02'31	-2.7m	desc. node	-264 Oct 09 j 15:58	24° \approx 22'00	
opposition	-269 Aug 24 j 02:12	25° \approx 35'20	-6°00'-11	max. Earth dist.	-264 Oct 13 j 08:25	27° \approx 02'29	2.44803 AU
direct	-269 Sep 23 j 09:08	20° \approx 10'16			-264 Oct 17 j 09:45	0° \approx	
	-269 Nov 04 j 13:23	0° \approx					
asc. node	-269 Dec 18 j 17:04	22° \approx 01'30		conjunction	-264 Nov 21 j 10:57	26° \approx 09'50	0°-27'-15
	-268 Jan 01 j 15:58	0° \approx		minimum elong	-264 Nov 21 j 09:19	26° \approx 06'44	0°27'14
	-268 Feb 20 j 14:14	0° \approx			-264 Nov 26 j 11:43	0° \approx	
	-268 Apr 09 j 05:26	0° \approx			-263 Jan 04 j 05:17	0° \approx	
	-268 May 27 j 11:52	0° \approx		greatest brilliancy	-263 Jan 09 j 10:20	4° \approx 04'54	1.2m
evening set	-268 Jul 09 j 08:12	26° \approx 56'43		morning rise	-263 Jan 22 j 19:57	14° \approx 36'15	
	-268 Jul 14 j 03:34	0° \approx			-263 Feb 11 j 10:20	0° \approx	
max. Earth dist.	-268 Aug 08 j 18:42	16° \approx 25'26	2.64712 AU		-263 Mar 21 j 23:56	0° \approx	
					-263 Apr 30 j 19:40	0° \approx	
conjunction	-268 Aug 24 j 04:43	26° \approx 26'11	1°03'23		-263 Jun 11 j 19:38	0° \approx	
minimum elong	-268 Aug 24 j 05:37	26° \approx 27'39	1°03'23		-263 Jul 27 j 05:14	0° \approx	
	-268 Aug 29 j 15:28	0° \approx		asc. node	-263 Aug 09 j 13:26	8° \approx 13'19	
morning rise	-268 Oct 08 j 14:28	26° \approx 37'17			-263 Sep 17 j 09:06	0° \approx	
	-268 Oct 13 j 13:53	0° \approx		retrograde	-263 Nov 26 j 20:35	21° \approx 59'19	
	-268 Nov 25 j 20:35	0° \approx		opposition	-262 Jan 05 j 22:09	12° \approx 15'07	4°19'53
desc. node	-267 Jan 04 j 17:13	28° \approx 35'54		greatest brilliancy	-262 Jan 05 j 18:37	12° \approx 18'39	-1.2m
	-267 Jan 06 j 15:22	0° \approx		min. Earth dist.	-262 Jan 05 j 13:11	12° \approx 24'06	0.67422 AU
	-267 Feb 16 j 07:20	0° \approx		direct	-262 Feb 15 j 10:21	2° \approx 29'50	
	-267 Mar 28 j 11:43	0° \approx			-262 May 10 j 04:11	0° \approx	
	-267 May 08 j 07:56	0° \approx			-262 Jul 01 j 13:05	0° \approx	
	-267 Jun 21 j 07:03	0° \approx			-262 Aug 16 j 14:59	0° \approx	
	-267 Aug 19 j 19:07	0° \approx		desc. node	-262 Aug 27 j 14:53	7° \approx 34'14	
retrograde	-267 Sep 13 j 21:36	4° \approx 07'08			-262 Sep 28 j 00:52	0° \approx	
	-267 Oct 07 j 20:25	30° \approx			-262 Nov 06 j 23:27	0° \approx	
min. Earth dist.	-267 Oct 14 j 10:43	27° \approx 42'09	0.52035 AU	evening set	-262 Nov 23 j 16:58	12° \approx 56'45	
opposition	-267 Oct 21 j 23:28	24° \approx 51'59	0°-40'-14		-262 Dec 15 j 11:05	0° \approx	
greatest brilliancy	-267 Oct 21 j 16:44	24° \approx 58'20	-2.0m		-261 Jan 22 j 11:10	0° \approx	
asc. node	-267 Nov 04 j 16:11	20° \approx 13'25					
direct	-267 Nov 25 j 19:04	17° \approx 13'51		conjunction	-261 Jan 28 j 08:40	4° \approx 38'27	-1°-5'-20
	-266 Jan 15 j 20:58	0° \approx		minimum elong	-261 Jan 28 j 08:59	4° \approx 39'04	1°05'21
	-266 Mar 16 j 12:03	0° \approx			-261 Mar 01 j 22:00	0° \approx	
	-266 May 07 j 08:25	0° \approx		max. Earth dist.	-261 Mar 13 j 16:35	9° \approx 00'59	2.38906 AU
	-266 Jun 25 j 10:46	0° \approx		morning rise	-261 Apr 07 j 12:15	27° \approx 40'22	
	-266 Aug 11 j 07:47	0° \approx			-261 Apr 10 j 15:45	0° \approx	
evening set	-266 Aug 16 j 12:15	3° \approx 24'38			-261 May 22 j 08:43	0° \approx	
max. Earth dist.	-266 Sep 04 j 19:26	16° \approx 16'32	2.56804 AU	asc. node	-261 Jun 27 j 12:34	24° \approx 40'49	
	-266 Sep 24 j 22:37	0° \approx			-261 Jul 05 j 13:39	0° \approx	
					-261 Aug 21 j 23:27	0° \approx	
conjunction	-266 Oct 03 j 07:48	5° \approx 48'29	0°30'20		-261 Oct 14 j 02:21	0° \approx	
minimum elong	-266 Oct 03 j 08:58	5° \approx 50'30	0°30'19	retrograde	-260 Jan 01 j 03:59	25° \approx 27'10	
	-266 Nov 06 j 09:44	0° \approx		opposition	-260 Feb 09 j 07:22	16° \approx 20'40	4°33'05
morning rise	-266 Nov 22 j 14:42	11° \approx 49'27		greatest brilliancy	-260 Feb 09 j 23:41	16° \approx 04'39	-1.3m
desc. node	-266 Nov 22 j 16:06	11° \approx 52'01		min. Earth dist.	-260 Feb 12 j 19:26	14° \approx 58'12	0.65660 AU
	-266 Dec 17 j 01:05	0° \approx		direct	-260 Mar 21 j 16:04	6° \approx 18'48	
	-265 Jan 25 j 09:48	0° \approx			-260 Jun 03 j 19:01	0° \approx	
	-265 Mar 05 j 04:52	0° \approx		desc. node	-260 Jul 14 j 13:07	23° \approx 36'38	
	-265 Apr 13 j 07:15	0° \approx			-260 Jul 24 j 13:14	0° \approx	
	-265 May 23 j 19:53	0° \approx			-260 Sep 06 j 07:18	0° \approx	
	-265 Jul 06 j 11:35	0° \approx			-260 Oct 16 j 16:01	0° \approx	
	-265 Aug 27 j 01:19	0° \approx			-260 Nov 24 j 07:09	0° \approx	
asc. node	-265 Sep 22 j 15:35	11° \approx 11'40			-259 Jan 01 j 10:11	0° \approx	
retrograde	-265 Oct 23 j 21:43	16° \approx 54'12		evening set	-259 Feb 01 j 02:17	23° \approx 52'30	
min. Earth dist.	-265 Nov 28 j 13:56	8° \approx 37'46	0.62642 AU		-259 Feb 09 j 01:42	0° \approx	
opposition	-265 Dec 02 j 18:38	6° \approx 57'00	2°44'33		-259 Mar 21 j 01:44	0° \approx	
greatest brilliancy	-265 Dec 02 j 03:39	7° \approx 12'00	-1.5m				
	-265 Dec 23 j 09:51	30° \approx		conjunction	-259 Apr 05 j 12:15	11° \approx 13'23	0°-23'-46
direct	-264 Jan 10 j 02:10	27° \approx 56'16		minimum elong	-259 Apr 05 j 13:49	11° \approx 16'12	0°23'45
	-264 Jan 29 j 03:24	0° \approx			-259 May 01 j 23:49	0° \approx	
	-264 Apr 12 j 01:06	0° \approx		asc. node	-259 May 14 j 12:49	8° \approx 41'23	
	-264 Jun 04 j 04:01	0° \approx		max. Earth dist.	-259 May 14 j 13:50	8° \approx 43'08	2.52091 AU
	-264 Jul 22 j 08:42	0° \approx		morning rise	-259 Jun 02 j 05:22	21° \approx 24'25	
	-264 Sep 05 j 05:34	0° \approx			-259 Jun 15 j 01:46	0° \approx	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 15

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-259 Jul 31 j 08:03	0°☾			-254 Oct 01 j 12:32	0°≈		
	-259 Sep 17 j 23:10	0°♈			-254 Nov 26 j 22:16	0°♏		
	-259 Nov 09 j 14:31	0°♍		asc. node	-253 Jan 04 j 09:16	23°♏58'24		
	-258 Jan 21 j 19:17	0°♊			-253 Jan 13 j 20:21	0°♍		
retrograde	-258 Feb 10 j 02:40	2°♊04'56			-253 Mar 01 j 18:40	0°♌		
	-258 Feb 28 j 05:17	30°♌♍			-253 Apr 18 j 00:32	0°♈		
opposition	-258 Mar 19 j 00:57	24°♍02'35	3°09'19		-253 Jun 04 j 14:24	0°☾		
greatest brilliancy	-258 Mar 20 j 04:57	23°♍36'27	-1.7m	evening set	-253 Jun 25 j 18:34	13°☾21'56		
min. Earth dist.	-258 Mar 26 j 03:17	21°♍23'48	0.57441 AU		-253 Jul 21 j 23:26	0°♈		
direct	-258 Apr 28 j 10:19	14°♍25'45		max. Earth dist.	-253 Jul 31 j 06:41	5°♈56'38	2.66426 AU	
desc. node	-258 Jun 01 j 11:54	21°♍04'41						
	-258 Jun 22 j 10:04	0°♊		conjunction	-253 Aug 10 j 17:05	12°♈38'22	1°08'36	
	-258 Aug 12 j 10:29	0°♌		minimum elong	-253 Aug 10 j 17:30	12°♈39'01	1°08'36	
	-258 Sep 23 j 22:14	0°♌			-253 Sep 06 j 11:56	0°♍		
	-258 Nov 02 j 13:04	0°♌		morning rise	-253 Sep 24 j 11:05	11°♍48'12		
	-258 Dec 11 j 08:46	0°≈			-253 Oct 21 j 17:31	0°♊		
	-257 Jan 19 j 15:56	0°♏			-253 Dec 04 j 13:07	0°♌		
	-257 Mar 01 j 07:47	0°♍			-252 Jan 16 j 01:56	0°♌		
asc. node	-257 Apr 01 j 11:18	22°♍06'37		desc. node	-252 Jan 22 j 10:17	4°♌32'42		
evening set	-257 Apr 02 j 10:47	22°♍47'33			-252 Feb 26 j 16:05	0°♌		
	-257 Apr 12 j 20:19	0°♌			-252 Apr 08 j 00:45	0°≈		
					-252 May 20 j 19:55	0°♏		
conjunction	-257 May 26 j 05:21	29°♌16'48	0°31'17		-252 Jul 10 j 00:59	0°♍		
minimum elong	-257 May 26 j 04:04	29°♌14'42	0°31'16	retrograde	-252 Aug 26 j 03:53	13°♍13'54		
	-257 May 27 j 07:28	0°♈		min. Earth dist.	-252 Sep 23 j 13:26	7°♍41'21	0.46917 AU	
max. Earth dist.	-257 Jun 14 j 06:55	11°♈48'21	2.62178 AU	opposition	-252 Oct 01 j 17:30	4°♍48'15	-2°-39'-5	
	-257 Jul 12 j 10:21	0°☾		greatest brilliancy	-252 Sep 30 j 15:43	5°♍11'08	-2.3m	
morning rise	-257 Jul 14 j 11:13	1°☾18'17			-252 Oct 17 j 09:36	30°♌♏		
	-257 Aug 28 j 18:28	0°♈		direct	-252 Nov 03 j 18:31	27°♏58'10		
	-257 Oct 16 j 03:27	0°♍		asc. node	-252 Nov 21 j 07:55	29°♏51'40		
	-257 Dec 05 j 06:58	0°♊			-252 Nov 21 j 23:54	0°♍		
	-256 Jan 30 j 00:59	0°♌			-251 Feb 01 j 07:41	0°♌		
retrograde	-256 Apr 05 j 14:36	19°♌30'47			-251 Mar 26 j 04:02	0°♈		
desc. node	-256 Apr 18 j 11:16	18°♌29'07			-251 May 15 j 03:58	0°☾		
opposition	-256 May 08 j 16:03	13°♌17'04	-1°-10'-36		-251 Jul 02 j 13:26	0°♈		
greatest brilliancy	-256 May 09 j 05:08	13°♌06'33	-2.4m	evening set	-251 Aug 01 j 08:31	19°♈00'43		
min. Earth dist.	-256 May 16 j 19:38	10°♌41'02	0.44647 AU		-251 Aug 18 j 05:29	0°♍		
direct	-256 Jun 13 j 15:04	5°♌44'21		max. Earth dist.	-251 Aug 24 j 16:28	4°♍14'59	2.60512 AU	
	-256 Aug 20 j 14:06	0°♌						
	-256 Oct 05 j 06:20	0°♌		conjunction	-251 Sep 16 j 22:58	19°♍47'46	0°46'33	
	-256 Nov 15 j 22:47	0°≈		minimum elong	-251 Sep 17 j 00:17	19°♍49'59	0°46'32	
	-256 Dec 27 j 05:14	0°♏			-251 Oct 01 j 22:28	0°♊		
	-255 Feb 07 j 10:24	0°♍		morning rise	-251 Nov 03 j 15:09	22°♊50'05		
asc. node	-255 Feb 16 j 09:38	6°♍14'24			-251 Nov 13 j 16:03	0°♌		
	-255 Mar 23 j 04:41	0°♌		desc. node	-251 Dec 09 j 09:16	18°♌40'57		
	-255 May 07 j 13:07	0°♈			-251 Dec 24 j 16:24	0°♌		
evening set	-255 May 17 j 13:43	6°♈30'48			-250 Feb 02 j 10:41	0°♌		
	-255 Jun 23 j 02:03	0°☾			-250 Mar 13 j 15:01	0°≈		
					-250 Apr 22 j 03:14	0°♏		
conjunction	-255 Jul 04 j 17:40	7°☾26'26	1°03'13		-250 Jun 02 j 07:42	0°♍		
minimum elong	-255 Jul 04 j 16:42	7°☾24'53	1°03'12		-250 Jul 17 j 19:43	0°♌		
max. Earth dist.	-255 Jul 08 j 00:38	9°☾32'18	2.67020 AU		-250 Sep 22 j 11:17	0°♈		
	-255 Aug 09 j 03:31	0°♈		retrograde	-250 Oct 09 j 08:24	1°♈50'39		
morning rise	-255 Aug 19 j 02:40	6°♈21'03		asc. node	-250 Oct 09 j 06:20	1°♈50'39		
	-255 Sep 25 j 02:37	0°♍			-250 Oct 25 j 08:34	30°♌♏		
	-255 Nov 10 j 16:27	0°♊		min. Earth dist.	-250 Nov 12 j 03:37	24°♌13'02	0.59091 AU	
	-255 Dec 27 j 00:16	0°♌		opposition	-250 Nov 17 j 18:31	21°♌59'37	1°41'02	
	-254 Feb 11 j 16:53	0°♌		greatest brilliancy	-250 Nov 17 j 05:34	22°♌12'26	-1.6m	
desc. node	-254 Mar 06 j 10:26	14°♌14'28		direct	-250 Dec 24 j 20:49	13°♌25'22		
	-254 Apr 01 j 17:11	0°♌			-249 Feb 23 j 17:52	0°♈		
	-254 Jun 11 j 05:59	0°≈			-249 Apr 23 j 01:10	0°☾		
retrograde	-254 Jun 23 j 12:13	0°≈57'48			-249 Jun 13 j 01:27	0°♈		
	-254 Jul 05 j 16:12	30°♌♏			-249 Jul 30 j 14:20	0°♍		
min. Earth dist.	-254 Jul 22 j 04:05	26°♏16'50	0.37564 AU	evening set	-249 Sep 11 j 00:35	28°♍24'57		
opposition	-254 Jul 24 j 01:36	25°♏46'29	-6°-51'-36		-249 Sep 13 j 07:41	0°♊		
greatest brilliancy	-254 Jul 23 j 14:06	25°♏54'09	-2.9m	max. Earth dist.	-249 Sep 26 j 04:21	8°♊57'36	2.49852 AU	
direct	-254 Aug 22 j 15:37	20°♏50'37			-249 Oct 25 j 13:52	0°♌		

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 16

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

desc. node	-249 Oct 27 j 07:52	1°♄16'35		morning rise	-244 May 13 j 12:34	3°♄00'15	
				asc. node	-244 May 31 j 03:49	15°♄08'50	
conjunction	-249 Nov 01 j 03:01	4°♄47'20	0°-3'-6		-244 Jun 22 j 06:12	0°♄	
minimum elong	-249 Nov 01 j 02:49	4°♄46'59	0°03'08		-244 Aug 07 j 18:38	0°♄	
behind sun begin	-249 Oct 31 j 04:31	4°♄06'05			-244 Sep 26 j 11:02	0°♄	
behind sun end	-249 Nov 02 j 01:07	5°♄27'55			-244 Nov 22 j 09:40	0°♄	
	-249 Dec 04 j 20:28	0°♄		retrograde	-243 Jan 24 j 02:16	17°♄16'54	
morning rise	-249 Dec 27 j 19:11	17°♄35'18		opposition	-243 Mar 03 j 01:28	8°♄45'24	3°56'20
	-248 Jan 12 j 19:07	0°♄		greatest brilliancy	-243 Mar 04 j 03:32	8°♄20'26	-1.5m
	-248 Feb 20 j 04:34	0°♄		min. Earth dist.	-243 Mar 08 j 19:59	6°♄32'50	0.61380 AU
	-248 Mar 29 j 21:32	0°♄			-243 Mar 31 j 00:13	30°♄	
	-248 May 08 j 20:43	0°♄		direct	-243 Apr 13 j 02:31	28°♄51'30	
	-248 Jun 20 j 04:53	0°♄			-243 Apr 26 j 17:30	0°♄	
	-248 Aug 05 j 18:11	0°♄		desc. node	-243 Jun 18 j 03:44	19°♄21'41	
asc. node	-248 Aug 26 j 06:08	11°♄48'32			-243 Jul 07 j 08:19	0°♄	
	-248 Oct 03 j 08:22	0°♄			-243 Aug 22 j 18:43	0°♄	
retrograde	-248 Nov 13 j 12:33	8°♄59'51			-243 Oct 03 j 01:36	0°♄	
	-248 Dec 21 j 10:22	30°♄			-243 Nov 11 j 03:18	0°♄	
min. Earth dist.	-248 Dec 21 j 17:48	29°♄52'32	0.66302 AU		-243 Dec 19 j 13:54	0°♄	
opposition	-248 Dec 23 j 15:20	29°♄06'47	3°53'28		-242 Jan 27 j 12:49	0°♄	
greatest brilliancy	-248 Dec 23 j 05:25	29°♄16'45	-1.3m		-242 Mar 08 j 20:27	0°♄	
direct	-247 Feb 01 j 10:19	19°♄35'32		evening set	-242 Mar 12 j 00:25	2°♄18'02	
	-247 Mar 20 j 02:55	0°♄		asc. node	-242 Apr 18 j 03:26	28°♄39'57	
	-247 May 20 j 14:09	0°♄			-242 Apr 20 j 01:32	0°♄	
	-247 Jul 09 j 17:05	0°♄					
	-247 Aug 24 j 04:09	0°♄		conjunction	-242 May 08 j 04:35	12°♄27'25	0°12'03
desc. node	-247 Sep 13 j 06:45	14°♄01'53		minimum elong	-242 May 08 j 03:57	12°♄26'20	0°12'04
	-247 Oct 05 j 10:24	0°♄		behind sun begin	-242 May 07 j 13:09	12°♄01'09	
evening set	-247 Oct 30 j 12:15	18°♄39'52		behind sun end	-242 May 08 j 18:45	12°♄51'29	
	-247 Nov 14 j 09:32	0°♄			-242 Jun 03 j 07:19	0°♄	
max. Earth dist.	-247 Dec 08 j 16:27	18°♄49'02	2.37829 AU	max. Earth dist.	-242 Jun 03 j 12:57	0°♄09'21	2.58820 AU
	-247 Dec 22 j 22:43	0°♄		morning rise	-242 Jun 29 j 01:54	16°♄54'44	
					-242 Jul 19 j 09:25	0°♄	
conjunction	-247 Dec 30 j 22:15	6°♄16'57	0°-59'-3		-242 Sep 05 j 01:16	0°♄	
minimum elong	-247 Dec 30 j 19:56	6°♄12'24	0°59'04		-242 Oct 24 j 12:07	0°♄	
	-246 Jan 30 j 00:00	0°♄			-242 Dec 16 j 20:48	0°♄	
	-246 Mar 09 j 11:06	0°♄		retrograde	-241 Mar 13 j 10:43	29°♄10'01	
morning rise	-246 Mar 10 j 09:03	0°♄42'14		opposition	-241 Apr 17 j 04:43	22°♄07'29	0°59'19
	-246 Apr 18 j 04:21	0°♄		greatest brilliancy	-241 Apr 17 j 17:33	21°♄56'19	-2.1m
	-246 May 29 j 21:49	0°♄		min. Earth dist.	-241 Apr 25 j 14:22	19°♄12'40	0.49847 AU
	-246 Jul 13 j 08:37	0°♄		desc. node	-241 May 06 j 03:15	16°♄02'34	
asc. node	-246 Jul 14 j 05:23	0°♄33'44		direct	-241 May 25 j 10:48	13°♄29'06	
	-246 Aug 30 j 19:08	0°♄			-241 Jul 19 j 11:04	0°♄	
	-246 Oct 27 j 23:50	0°♄			-241 Sep 06 j 05:25	0°♄	
retrograde	-246 Dec 18 j 02:46	12°♄31'25			-241 Oct 17 j 22:36	0°♄	
opposition	-245 Jan 26 j 17:45	3°♄07'38	4°37'34		-241 Nov 26 j 22:42	0°♄	
greatest brilliancy	-245 Jan 27 j 02:09	2°♄59'18	-1.2m		-240 Jan 06 j 03:26	0°♄	
min. Earth dist.	-245 Jan 28 j 17:12	2°♄20'34	0.67128 AU		-240 Feb 16 j 13:19	0°♄	
	-245 Feb 03 j 17:47	30°♄		asc. node	-240 Mar 05 j 01:43	12°♄20'00	
direct	-245 Mar 08 j 22:24	23°♄08'46			-240 Mar 30 j 16:49	0°♄	
	-245 Apr 14 j 09:12	0°♄		evening set	-240 Apr 30 j 19:49	20°♄54'17	
	-245 Jun 16 j 06:14	0°♄			-240 May 14 j 14:40	0°♄	
desc. node	-245 Aug 01 j 05:41	28°♄34'47					
	-245 Aug 03 j 09:00	0°♄		conjunction	-240 Jun 19 j 16:53	23°♄26'30	0°53'57
	-245 Sep 15 j 09:51	0°♄		minimum elong	-240 Jun 19 j 15:34	23°♄24'23	0°53'57
	-245 Oct 25 j 12:46	0°♄		max. Earth dist.	-240 Jun 28 j 21:15	29°♄20'22	2.65779 AU
	-245 Dec 03 j 01:13	0°♄			-240 Jun 29 j 21:58	0°♄	
evening set	-244 Jan 05 j 11:23	26°♄22'28		morning rise	-240 Aug 05 j 03:48	23°♄07'02	
	-244 Jan 10 j 01:52	0°♄			-240 Aug 16 j 00:01	0°♄	
greatest brilliancy	-244 Jan 12 j 09:40	1°♄49'42	1.2m		-240 Oct 02 j 08:40	0°♄	
	-244 Feb 17 j 14:22	0°♄			-240 Nov 18 j 21:53	0°♄	
					-239 Jan 06 j 05:59	0°♄	
conjunction	-244 Mar 12 j 01:18	17°♄48'47	0°-46'-9		-239 Feb 26 j 13:00	0°♄	
minimum elong	-244 Mar 12 j 04:08	17°♄54'06	0°46'07	desc. node	-239 Mar 23 j 03:30	12°♄44'03	
	-244 Mar 28 j 10:38	0°♄			-239 May 18 j 12:17	0°♄	
max. Earth dist.	-244 Apr 28 j 03:01	22°♄11'04	2.46987 AU	retrograde	-239 May 22 j 04:18	0°♄05'09	
	-244 May 09 j 05:16	0°♄			-239 May 25 j 20:09	30°♄	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 17

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

opposition	-239 Jun 21 j 14:41	25° \mathring{A} 01'33	-5°-25'-29	max. Earth dist.	-234 Sep 12 j 00:13	24° \mathring{M} 17'10	2.54504 AU
greatest brilliancy	-239 Jun 22 j 10:42	24° \mathring{A} 47'51	-2.8m		-234 Sep 20 j 08:03	0° \mathring{A}	
min. Earth dist.	-239 Jun 25 j 03:28	24° \mathring{A} 03'41	0.38377 AU				
direct	-239 Jul 22 j 23:00	19° \mathring{A} 33'05		conjunction	-234 Oct 13 j 05:53	16° \mathring{A} 01'16	0°19'07
	-239 Sep 02 j 19:51	0° \mathring{Z}		minimum elong	-234 Oct 13 j 06:44	16° \mathring{A} 02'45	0°19'07
	-239 Oct 26 j 00:18	0° \mathring{A}			-234 Nov 01 j 17:45	0° \mathring{M}	
	-239 Dec 10 j 09:19	0° \mathring{H}		desc. node	-234 Nov 13 j 00:09	8° \mathring{M} 13'03	
asc. node	-238 Jan 20 j 23:41	28° \mathring{H} 01'43		morning rise	-234 Dec 04 j 10:16	24° \mathring{M} 06'41	
	-238 Jan 23 j 22:13	0° \mathring{Y}			-234 Dec 12 j 06:12	0° \mathring{A}	
	-238 Mar 10 j 04:11	0° \mathring{B}			-233 Jan 20 j 11:05	0° \mathring{Z}	
	-238 Apr 25 j 11:29	0° \mathring{I}			-233 Feb 28 j 02:04	0° \mathring{A}	
evening set	-238 Jun 11 j 00:41	29° \mathring{I} 40'03			-233 Apr 08 j 00:02	0° \mathring{H}	
	-238 Jun 11 j 13:15	0° \mathring{B}			-233 May 18 j 05:42	0° \mathring{Y}	
max. Earth dist.	-238 Jul 22 j 04:52	25° \mathring{B} 49'57	2.67305 AU		-233 Jun 30 j 05:12	0° \mathring{B}	
					-233 Aug 18 j 01:28	0° \mathring{I}	
conjunction	-238 Jul 27 j 11:43	29° \mathring{B} 12'08	1°09'41	asc. node	-233 Sep 12 j 21:26	12° \mathring{I} 55'59	
minimum elong	-238 Jul 27 j 11:35	29° \mathring{B} 11'54	1°09'41	retrograde	-233 Oct 31 j 22:34	25° \mathring{I} 28'21	
	-238 Jul 28 j 17:44	0° \mathring{Q}		min. Earth dist.	-233 Dec 07 j 13:30	16° \mathring{I} 52'31	0.64214 AU
morning rise	-238 Sep 10 j 02:23	27° \mathring{Q} 52'51		opposition	-233 Dec 10 j 22:49	15° \mathring{I} 30'52	3°14'10
	-238 Sep 13 j 08:43	0° \mathring{M}		greatest brilliancy	-233 Dec 10 j 08:40	15° \mathring{I} 45'05	-1.4m
	-238 Oct 29 j 00:05	0° \mathring{A}		direct	-232 Jan 18 j 19:57	6° \mathring{I} 17'58	
	-238 Dec 12 j 13:17	0° \mathring{M}			-232 Apr 04 j 11:05	0° \mathring{B}	
	-237 Jan 25 j 04:20	0° \mathring{A}			-232 May 29 j 14:45	0° \mathring{Q}	
desc. node	-237 Feb 08 j 02:12	9° \mathring{A} 39'56			-232 Jul 17 j 09:48	0° \mathring{M}	
	-237 Mar 09 j 06:49	0° \mathring{Z}			-232 Aug 31 j 11:52	0° \mathring{A}	
	-237 Apr 21 j 23:41	0° \mathring{A}		desc. node	-232 Sep 29 j 22:50	20° \mathring{A} 44'30	
	-237 Jun 09 j 10:51	0° \mathring{H}		evening set	-232 Oct 09 j 02:27	27° \mathring{A} 21'47	
retrograde	-237 Aug 05 j 06:33	18° \mathring{H} 18'06			-232 Oct 12 j 17:11	0° \mathring{M}	
min. Earth dist.	-237 Sep 01 j 03:05	13° \mathring{H} 32'31	0.41984 AU	max. Earth dist.	-232 Oct 27 j 06:13	10° \mathring{M} 43'55	2.42046 AU
greatest brilliancy	-237 Sep 07 j 00:52	11° \mathring{H} 39'31	-2.6m		-232 Nov 21 j 18:40	0° \mathring{A}	
opposition	-237 Sep 08 j 15:09	11° \mathring{H} 08'49	-4°-52'-43				
direct	-237 Oct 09 j 17:25	5° \mathring{H} 14'44		conjunction	-232 Dec 04 j 19:47	10° \mathring{A} 02'02	0°-40'-34
asc. node	-237 Dec 08 j 23:39	22° \mathring{H} 55'06		minimum elong	-232 Dec 04 j 17:25	9° \mathring{A} 57'28	0°40'33
	-237 Dec 23 j 01:15	0° \mathring{Y}			-232 Dec 30 j 10:50	0° \mathring{Z}	
	-236 Feb 14 j 01:45	0° \mathring{B}			-231 Feb 06 j 14:20	0° \mathring{A}	
	-236 Apr 03 j 19:33	0° \mathring{I}		morning rise	-231 Feb 08 j 07:51	1° \mathring{A} 21'32	
	-236 May 22 j 14:26	0° \mathring{B}			-231 Mar 17 j 02:29	0° \mathring{H}	
	-236 Jul 09 j 11:53	0° \mathring{Q}			-231 Apr 25 j 20:08	0° \mathring{Y}	
evening set	-236 Jul 17 j 16:29	5° \mathring{Q} 12'30			-231 Jun 06 j 15:51	0° \mathring{B}	
max. Earth dist.	-236 Aug 14 j 10:36	23° \mathring{Q} 04'14	2.63436 AU		-231 Jul 21 j 13:30	0° \mathring{I}	
	-236 Aug 25 j 01:15	0° \mathring{M}		asc. node	-231 Jul 30 j 20:36	5° \mathring{I} 52'39	
					-231 Sep 09 j 19:29	0° \mathring{B}	
conjunction	-236 Sep 01 j 16:03	5° \mathring{M} 00'35	0°58'26	retrograde	-231 Dec 04 j 13:33	29° \mathring{B} 46'26	
minimum elong	-236 Sep 01 j 17:10	5° \mathring{M} 02'25	0°58'25	opposition	-230 Jan 13 j 12:01	20° \mathring{B} 08'27	4°29'52
	-236 Oct 08 j 21:55	0° \mathring{A}		greatest brilliancy	-230 Jan 13 j 12:32	20° \mathring{B} 07'56	-1.2m
morning rise	-236 Oct 17 j 16:07	6° \mathring{A} 00'12		min. Earth dist.	-230 Jan 13 j 22:58	19° \mathring{B} 57'31	0.67594 AU
	-236 Nov 20 j 23:42	0° \mathring{M}		direct	-230 Feb 23 j 07:08	10° \mathring{B} 17'10	
desc. node	-236 Dec 26 j 00:53	25° \mathring{M} 16'38			-230 May 02 j 03:20	0° \mathring{Q}	
	-235 Jan 01 j 11:28	0° \mathring{A}			-230 Jun 25 j 20:10	0° \mathring{M}	
	-235 Feb 10 j 18:39	0° \mathring{Z}			-230 Aug 11 j 12:53	0° \mathring{A}	
	-235 Mar 22 j 12:40	0° \mathring{A}		desc. node	-230 Aug 17 j 21:38	4° \mathring{A} 20'03	
	-235 May 01 j 17:47	0° \mathring{H}			-230 Sep 23 j 03:38	0° \mathring{M}	
	-235 Jun 13 j 05:56	0° \mathring{Y}			-230 Nov 02 j 03:50	0° \mathring{A}	
	-235 Aug 02 j 12:07	0° \mathring{B}		evening set	-230 Dec 08 j 16:39	28° \mathring{A} 27'23	
retrograde	-235 Sep 23 j 14:28	15° \mathring{B} 04'46			-230 Dec 10 j 15:41	0° \mathring{Z}	
min. Earth dist.	-235 Oct 25 j 08:36	8° \mathring{B} 11'54	0.54725 AU		-229 Jan 17 j 15:41	0° \mathring{A}	
asc. node	-235 Oct 25 j 23:13	7° \mathring{B} 58'02					
opposition	-235 Nov 01 j 06:20	5° \mathring{B} 32'05	0°17'42	conjunction	-229 Feb 13 j 15:37	21° \mathring{A} 08'15	-1°-1'-59
greatest brilliancy	-235 Nov 07 j 12:44	3° \mathring{B} 11'09	-1.9m	minimum elong	-229 Feb 13 j 17:35	21° \mathring{A} 12'05	1°01'59
	-235 Nov 17 j 18:34	30° \mathring{R} \mathring{Y}			-229 Feb 25 j 02:43	0° \mathring{H}	
direct	-235 Dec 06 j 22:17	27° \mathring{Y} 31'35		max. Earth dist.	-229 Apr 05 j 06:54	29° \mathring{H} 34'41	2.41644 AU
	-235 Dec 27 j 12:36	0° \mathring{B}			-229 Apr 05 j 20:36	0° \mathring{Y}	
	-234 Mar 09 j 08:57	0° \mathring{I}		morning rise	-229 Apr 21 j 21:04	11° \mathring{Y} 42'55	
	-234 May 01 j 20:50	0° \mathring{B}			-229 May 17 j 13:02	0° \mathring{B}	
	-234 Jun 20 j 13:18	0° \mathring{Q}		asc. node	-229 Jun 17 j 20:15	21° \mathring{B} 29'06	
	-234 Aug 06 j 15:48	0° \mathring{M}			-229 Jun 30 j 14:52	0° \mathring{I}	
evening set	-234 Aug 25 j 11:51	12° \mathring{M} 27'09			-229 Aug 16 j 13:49	0° \mathring{B}	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 18

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-229 Oct 06 j 23:55	0°♈	direct	-224 Jun 26 j 15:08	20°♌37'07	
	-229 Dec 15 j 07:23	0°♍		-224 Aug 04 j 18:29	0°♊	
retrograde	-228 Jan 09 j 13:31	3°♍28'37		-224 Sep 26 j 10:44	0°♈	
	-228 Feb 01 j 21:20	30°♌♈		-224 Nov 08 j 23:14	0°♍	
opposition	-228 Feb 17 j 08:01	24°♌33'13	4°23'59	-224 Dec 21 j 04:11	0°♋	
greatest brilliancy	-228 Feb 18 j 04:19	24°♌13'25	-1.4m	-223 Feb 01 j 23:41	0°♍	
min. Earth dist.	-228 Feb 21 j 15:34	22°♌52'18	0.64420 AU	-223 Feb 06 j 16:46	3°♍15'02	
direct	-228 Mar 29 j 15:51	14°♌32'00		-223 Mar 18 j 03:30	0°♊	
	-228 May 25 j 14:20	0°♍		-223 May 02 j 18:11	0°♌	
desc. node	-228 Jul 04 j 21:17	21°♍40'02	evening set	-223 May 26 j 16:34	15°♌26'26	
	-228 Jul 18 j 10:12	0°♌		-223 Jun 18 j 10:35	0°♍	
	-228 Aug 31 j 21:44	0°♌				
	-228 Oct 11 j 13:00	0°♊	conjunction	-223 Jul 13 j 03:04	15°♍44'02	1°06'45
	-228 Nov 19 j 07:01	0°♈	minimum elong	-223 Jul 13 j 02:23	15°♍42'57	1°06'45
	-228 Dec 27 j 11:45	0°♍	max. Earth dist.	-223 Jul 13 j 08:36	15°♍52'50	2.67350 AU
	-227 Feb 04 j 04:55	0°♋		-223 Aug 04 j 12:26	0°♌	
evening set	-227 Feb 15 j 22:59	8°♋55'47	morning rise	-223 Aug 27 j 02:22	14°♌25'37	
	-227 Mar 16 j 06:33	0°♍		-223 Sep 20 j 08:11	0°♍	
				-223 Nov 05 j 12:54	0°♌	
conjunction	-227 Apr 18 j 02:56	23°♍36'08	0°-10'-12	-223 Dec 21 j 02:38	0°♌	
minimum elong	-227 Apr 18 j 03:34	23°♍37'15	0°10'13	-222 Feb 04 j 09:37	0°♊	
behind sun begin	-227 Apr 17 j 08:44	23°♍04'05	desc. node	-222 Feb 24 j 18:42	13°♊25'59	
behind sun end	-227 Apr 18 j 22:23	24°♍10'24		-222 Mar 22 j 07:21	0°♈	
	-227 Apr 27 j 06:01	0°♊		-222 May 11 j 11:40	0°♍	
asc. node	-227 May 04 j 18:18	5°♊12'52	retrograde	-222 Jul 10 j 07:08	19°♍07'13	
max. Earth dist.	-227 May 22 j 12:13	17°♊21'40	2.54705 AU	-222 Aug 06 j 10:29	14°♍39'32	0.38444 AU
	-227 Jun 10 j 08:14	0°♌	opposition	-222 Aug 10 j 23:32	13°♍22'45	-6°-37'-26
morning rise	-227 Jun 12 j 11:36	1°♌25'15	greatest brilliancy	-222 Aug 09 j 19:27	13°♍42'37	-2.8m
	-227 Jul 26 j 11:38	0°♍	direct	-222 Sep 09 j 18:53	8°♍16'27	
	-227 Sep 12 j 15:42	0°♌		-222 Nov 15 j 15:15	0°♋	
	-227 Nov 02 j 18:45	0°♍	asc. node	-222 Dec 25 j 15:49	22°♋47'33	
	-226 Jan 02 j 03:38	0°♌		-221 Jan 06 j 13:36	0°♍	
retrograde	-226 Feb 20 j 16:50	11°♌36'43		-221 Feb 23 j 22:24	0°♊	
opposition	-226 Mar 28 j 22:15	3°♌53'14	2°30'38	-221 Apr 12 j 21:01	0°♌	
greatest brilliancy	-226 Mar 29 j 23:56	3°♌29'42	-1.8m	-221 May 30 j 19:32	0°♍	
min. Earth dist.	-226 Apr 05 j 14:39	1°♌04'39	0.54927 AU	-221 Jul 04 j 03:27	21°♍37'12	
	-226 Apr 08 j 16:27	30°♌♍	evening set	-221 Jul 17 j 08:16	0°♌	
direct	-226 May 07 j 17:25	24°♍31'50	max. Earth dist.	-221 Aug 05 j 17:39	12°♌24'15	2.65580 AU
desc. node	-226 May 22 j 19:54	25°♍59'11				
	-226 Jun 07 j 01:21	0°♌	conjunction	-221 Aug 18 j 23:36	20°♌57'20	1°06'03
	-226 Aug 04 j 22:20	0°♌	minimum elong	-221 Aug 19 j 00:18	20°♌58'28	1°06'03
	-226 Sep 17 j 17:44	0°♊		-221 Sep 01 j 20:58	0°♍	
	-226 Oct 27 j 21:17	0°♈	morning rise	-221 Oct 03 j 00:28	20°♍36'30	
	-226 Dec 06 j 00:12	0°♍		-221 Oct 16 j 23:18	0°♌	
	-225 Jan 14 j 12:52	0°♋		-221 Nov 29 j 12:16	0°♌	
	-225 Feb 24 j 09:10	0°♍		-220 Jan 10 j 15:20	0°♊	
asc. node	-225 Mar 22 j 17:14	18°♍40'31	desc. node	-220 Jan 12 j 17:17	1°♊30'16	
	-225 Apr 08 j 01:19	0°♊		-220 Feb 20 j 16:40	0°♈	
evening set	-225 Apr 13 j 15:38	3°♊50'08		-220 Apr 01 j 07:43	0°♍	
	-225 May 22 j 14:58	0°♌		-220 May 12 j 19:22	0°♋	
				-220 Jun 27 j 09:11	0°♍	
conjunction	-225 Jun 04 j 20:31	8°♌41'35	0°40'45	-220 Sep 06 j 03:31	25°♍55'57	
minimum elong	-225 Jun 04 j 19:06	8°♌39'17	0°40'45	-220 Oct 05 j 17:04	19°♍53'54	0.49757 AU
max. Earth dist.	-225 Jun 20 j 05:09	18°♌41'16	2.63691 AU	-220 Oct 13 j 14:31	16°♍59'45	-1°-28'-19
	-225 Jul 07 j 18:25	0°♍	greatest brilliancy	-220 Oct 12 j 23:40	17°♍13'27	-2.1m
morning rise	-225 Jul 22 j 22:10	9°♍41'33	asc. node	-220 Nov 11 j 14:31	9°♍52'07	
	-225 Aug 23 j 23:14	0°♌	direct	-220 Nov 16 j 15:38	9°♍41'51	
	-225 Oct 10 j 21:34	0°♍		-219 Jan 22 j 23:33	0°♊	
	-225 Nov 28 j 20:53	0°♌		-219 Mar 19 j 23:56	0°♌	
	-224 Jan 19 j 18:33	0°♌		-219 May 09 j 23:32	0°♍	
	-224 Mar 28 j 15:52	0°♊		-219 Jun 27 j 18:41	0°♌	
desc. node	-224 Apr 08 j 18:52	2°♊13'39	evening set	-219 Aug 09 j 22:58	27°♌37'04	
retrograde	-224 Apr 21 j 07:05	3°♊09'03		-219 Aug 13 j 14:20	0°♍	
	-224 May 14 j 03:20	30°♌♌	max. Earth dist.	-219 Aug 31 j 00:33	11°♍31'22	2.58546 AU
opposition	-224 May 23 j 05:35	27°♌24'30	-2°-41'-29			
greatest brilliancy	-224 May 24 j 05:24	27°♌06'31	-2.6m	conjunction	-219 Sep 26 j 03:50	29°♍13'01 0°37'41
min. Earth dist.	-224 May 30 j 11:29	25°♌13'39	0.41978 AU	minimum elong	-219 Sep 26 j 05:07	29°♍15'12 0°37'40

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 19

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-219 Sep 27 j 07:12	0°♄			-214 Aug 24 j 21:25	0°♄		
	-219 Nov 08 j 22:02	0°♌			-214 Oct 18 j 11:23	0°♌		
morning rise	-219 Nov 14 j 03:36	3°♌46'41		retrograde	-214 Dec 26 j 03:06	20°♌21'32		
desc. node	-219 Nov 29 j 16:00	15°♌05'54		opposition	-213 Feb 03 j 11:39	11°♌06'47	4°36'19	
	-219 Dec 19 j 18:05	0°♏		greatest brilliancy	-213 Feb 04 j 00:28	10°♌54'09	-1.3m	
	-218 Jan 28 j 07:23	0°♐		min. Earth dist.	-213 Feb 06 j 07:04	10°♌00'15	0.66446 AU	
	-218 Mar 08 j 06:18	0°♑		direct	-213 Mar 16 j 18:39	1°♌05'40		
	-218 Apr 16 j 12:12	0°♒			-213 Jun 09 j 05:48	0°♑		
	-218 May 27 j 05:29	0°♓		desc. node	-213 Jul 22 j 13:01	25°♑56'00		
	-218 Jul 10 j 09:57	0°♈			-213 Jul 28 j 19:17	0°♄		
	-218 Sep 02 j 22:44	0°♊			-213 Sep 10 j 06:47	0°♌		
asc. node	-218 Sep 29 j 13:56	8°♊57'19			-213 Oct 20 j 13:52	0°♏		
retrograde	-218 Oct 17 j 19:10	11°♊03'25			-213 Nov 28 j 04:14	0°♐		
min. Earth dist.	-218 Nov 21 j 15:41	3°♊03'42	0.61159 AU		-212 Jan 05 j 05:57	0°♑		
opposition	-218 Nov 26 j 11:57	1°♊07'45	2°20'07	evening set	-212 Jan 21 j 04:37	12°♑29'24		
greatest brilliancy	-218 Nov 25 j 20:58	1°♊22'43	-1.5m		-212 Feb 12 j 19:25	0°♒		
	-218 Nov 29 j 08:27	30°♒♈			-212 Mar 23 j 16:38	0°♓		
direct	-217 Jan 03 j 06:41	22°♈18'15						
	-217 Feb 11 j 06:12	0°♊		conjunction	-212 Mar 26 j 06:15	1°♓53'12	0°-33'-44	
	-217 Apr 16 j 16:18	0°♋		minimum elong	-212 Mar 26 j 08:29	1°♓57'18	0°33'43	
	-217 Jun 07 j 20:31	0°♌			-212 May 04 j 11:37	0°♈		
	-217 Jul 25 j 19:19	0°♍		max. Earth dist.	-212 May 08 j 03:50	2°♈33'59	2.49853 AU	
	-217 Sep 08 j 16:00	0°♄		asc. node	-212 May 21 j 11:02	11°♈45'30		
evening set	-217 Sep 21 j 00:25	8°♄35'45		morning rise	-212 May 25 j 00:46	14°♈12'13		
max. Earth dist.	-217 Oct 05 j 20:29	19°♄06'36	2.47081 AU		-212 Jun 17 j 11:32	0°♊		
desc. node	-217 Oct 17 j 15:57	27°♄37'43			-212 Aug 02 j 18:35	0°♋		
	-217 Oct 20 j 22:06	0°♌			-212 Sep 20 j 17:38	0°♌		
					-212 Nov 13 j 17:14	0°♍		
conjunction	-217 Nov 12 j 20:33	16°♌57'26	0°-16'-49	retrograde	-211 Feb 02 j 14:08	26°♍01'41		
minimum elong	-217 Nov 12 j 19:34	16°♌55'36	0°16'50	opposition	-211 Mar 11 j 23:57	17°♍45'24	3°31'30	
	-217 Nov 30 j 02:56	0°♏		greatest brilliancy	-211 Mar 13 j 03:32	17°♍19'17	-1.6m	
morning rise	-216 Jan 07 j 23:04	0°♐		min. Earth dist.	-211 Mar 18 j 12:11	15°♍17'43	0.59315 AU	
	-216 Jan 11 j 14:45	2°♐51'19		direct	-211 Apr 21 j 17:05	7°♍59'23		
	-216 Feb 15 j 05:50	0°♑		desc. node	-211 Jun 08 j 11:47	19°♍58'34		
greatest brilliancy	-216 Mar 10 j 15:42	19°♑02'38	1.2m		-211 Jun 28 j 20:26	0°♄		
	-216 Mar 24 j 20:18	0°♒			-211 Aug 16 j 12:18	0°♌		
	-216 May 03 j 16:19	0°♓			-211 Sep 27 j 10:46	0°♏		
	-216 Jun 14 j 17:39	0°♈			-211 Nov 05 j 19:39	0°♐		
	-216 Jul 30 j 10:53	0°♊			-211 Dec 14 j 10:37	0°♑		
asc. node	-216 Aug 16 j 12:17	10°♊17'16			-210 Jan 22 j 13:08	0°♒		
	-216 Sep 22 j 07:59	0°♋			-210 Mar 04 j 00:07	0°♓		
retrograde	-216 Nov 21 j 05:11	16°♋57'05		evening set	-210 Mar 24 j 11:30	14°♓41'24		
min. Earth dist.	-216 Dec 30 j 05:56	7°♋34'00	0.67053 AU	asc. node	-210 Apr 08 j 09:55	25°♓11'39		
opposition	-216 Dec 31 j 07:31	7°♋08'19	4°10'22		-210 Apr 15 j 07:52	0°♈		
greatest brilliancy	-216 Dec 31 j 00:53	7°♋14'59	-1.3m					
	-215 Jan 20 j 19:24	30°♒♊		conjunction	-210 May 18 j 16:31	22°♈42'12	0°23'35	
direct	-215 Feb 09 j 12:16	27°♊28'56		minimum elong	-210 May 18 j 15:26	22°♈40'24	0°23'35	
	-215 Mar 02 j 21:03	0°♋			-210 May 29 j 15:22	0°♊		
	-215 May 14 j 00:31	0°♌		max. Earth dist.	-210 Jun 09 j 20:41	7°♊24'25	2.60772 AU	
	-215 Jul 04 j 09:56	0°♍		morning rise	-210 Jul 08 j 00:21	25°♊42'34		
	-215 Aug 19 j 06:52	0°♄			-210 Jul 14 j 16:40	0°♋		
desc. node	-215 Sep 03 j 14:52	10°♄36'47			-210 Aug 31 j 02:58	0°♌		
	-215 Sep 30 j 16:23	0°♌			-210 Oct 18 j 21:21	0°♍		
	-215 Nov 09 j 16:11	0°♏			-210 Dec 09 j 03:20	0°♄		
evening set	-215 Nov 12 j 18:41	2°♏23'06			-209 Feb 07 j 17:45	0°♌		
	-215 Dec 18 j 04:54	0°♐		retrograde	-209 Mar 26 j 13:32	10°♌43'05		
				desc. node	-209 Apr 26 j 11:10	5°♌05'27		
conjunction	-214 Jan 15 j 18:04	22°♐31'54	-1°-4'-27	opposition	-209 Apr 29 j 10:36	4°♌06'32	0°-9'-55	
minimum elong	-214 Jan 15 j 17:02	22°♐29'52	1°04'29	greatest brilliancy	-209 Jan 17 j 00:36	20°♄25'02	-3.2m	
	-214 Jan 25 j 05:14	0°♑		min. Earth dist.	-209 May 07 j 21:32	1°♌17'58	0.46960 AU	
max. Earth dist.	-214 Feb 06 j 21:48	9°♑58'35	2.37384 AU		-209 May 12 j 01:58	30°♒♄		
	-214 Mar 04 j 15:28	0°♒		direct	-209 Jun 05 j 12:43	26°♄01'33		
morning rise	-214 Mar 26 j 15:22	16°♒47'03			-209 Jun 30 j 10:20	0°♌		
	-214 Apr 13 j 07:49	0°♓			-209 Aug 28 j 14:50	0°♏		
	-214 May 24 j 23:18	0°♈			-209 Oct 11 j 02:26	0°♐		
asc. node	-214 Jul 04 j 10:59	27°♈32'25			-209 Nov 20 j 21:34	0°♑		
	-214 Jul 08 j 04:44	0°♊			-209 Dec 31 j 14:15	0°♒		

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 20

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-208 Feb 11 j 09:00	0°♄		desc. node	-204 Dec 16 j 09:10	21°♍50'45	
asc. node	-208 Feb 24 j 08:00	9°♄04'59			-204 Dec 27 j 10:45	0°♌	
	-208 Mar 25 j 18:57	0°♌			-203 Feb 05 j 10:54	0°♌	
	-208 May 09 j 21:28	0°♍			-203 Mar 16 j 20:34	0°♍	
evening set	-208 May 10 j 12:57	0°♍25'20			-203 Apr 25 j 14:28	0°♌	
	-208 Jun 25 j 07:02	0°♍			-203 Jun 06 j 04:26	0°♄	
					-203 Jul 22 j 22:53	0°♌	
conjunction	-208 Jun 28 j 09:44	1°♍59'32	0°59'49	retrograde	-203 Oct 02 j 19:20	25°♌21'59	
minimum elong	-208 Jun 28 j 08:36	1°♍57'43	0°59'49	asc. node	-203 Oct 16 j 04:21	24°♌03'43	
max. Earth dist.	-208 Jul 04 j 06:53	5°♍45'09	2.66571 AU	min. Earth dist.	-203 Nov 04 j 17:10	18°♌03'29	0.57237 AU
	-208 Aug 11 j 08:16	0°♌		opposition	-203 Nov 10 j 22:26	15°♌37'03	1°08'43
morning rise	-208 Aug 13 j 04:44	1°♌10'43		greatest brilliancy	-203 Nov 10 j 12:19	15°♌47'00	-1.7m
	-208 Sep 27 j 11:18	0°♍		direct	-203 Dec 17 j 09:46	7°♌16'56	
	-208 Nov 13 j 10:30	0°♌			-202 Mar 01 j 04:11	0°♍	
	-208 Dec 30 j 12:41	0°♍			-202 Apr 26 j 02:38	0°♍	
	-207 Feb 16 j 18:28	0°♌			-202 Jun 15 j 13:09	0°♌	
desc. node	-207 Mar 13 j 10:04	14°♌32'53			-202 Aug 01 j 22:37	0°♍	
	-207 Apr 11 j 04:09	0°♌		evening set	-202 Sep 03 j 18:24	21°♍50'11	
retrograde	-207 Jun 09 j 11:57	17°♌35'32			-202 Sep 15 j 16:42	0°♌	
opposition	-207 Jul 09 j 17:32	12°♌36'01	-6°-30'-32	max. Earth dist.	-202 Sep 19 j 20:35	2°♌52'35	2.52006 AU
greatest brilliancy	-207 Jul 09 j 21:46	12°♌33'14	-2.9m				
min. Earth dist.	-207 Jul 10 j 07:27	12°♌26'50	0.37542 AU	conjunction	-202 Oct 23 j 16:43	26°♌49'56	0°06'47
direct	-207 Aug 08 j 17:50	7°♌34'02		minimum elong	-202 Oct 23 j 17:03	26°♌50'33	0°06'47
	-207 Oct 14 j 04:44	0°♍		behind sun begin	-202 Oct 22 j 20:52	26°♌14'07	
	-207 Dec 02 j 14:42	0°♌		behind sun end	-202 Oct 24 j 13:14	27°♌27'01	
asc. node	-206 Jan 11 j 07:25	25°♌48'38			-202 Oct 28 j 01:39	0°♍	
	-206 Jan 17 j 17:06	0°♄		desc. node	-202 Nov 03 j 07:52	4°♍33'48	
	-206 Mar 04 j 18:24	0°♌			-202 Dec 07 j 11:40	0°♌	
	-206 Apr 20 j 12:50	0°♍		morning rise	-202 Dec 17 j 04:38	7°♌22'32	
	-206 Jun 06 j 20:39	0°♍			-201 Jan 15 j 13:38	0°♌	
evening set	-206 Jun 19 j 12:40	8°♍00'55			-201 Feb 23 j 01:27	0°♍	
	-206 Jul 24 j 03:35	0°♌			-201 Apr 02 j 19:53	0°♌	
max. Earth dist.	-206 Jul 27 j 11:18	2°♌07'11	2.66921 AU		-201 May 12 j 20:27	0°♄	
					-201 Jun 24 j 08:07	0°♌	
conjunction	-206 Aug 04 j 15:31	7°♌20'48	1°09'31		-201 Aug 10 j 12:55	0°♍	
minimum elong	-206 Aug 04 j 15:42	7°♌21'06	1°09'31	asc. node	-201 Sep 03 j 03:58	13°♍02'19	
	-206 Sep 08 j 17:37	0°♍			-201 Oct 14 j 08:34	0°♍	
morning rise	-206 Sep 18 j 06:24	6°♍13'40		retrograde	-201 Nov 08 j 19:19	3°♍47'14	
	-206 Oct 24 j 03:50	0°♌			-201 Dec 02 j 09:31	30°♍	
	-206 Dec 07 j 07:21	0°♍		min. Earth dist.	-201 Dec 16 j 07:31	24°♍53'44	0.65489 AU
	-205 Jan 19 j 07:06	0°♌		opposition	-201 Dec 18 j 21:30	23°♍51'24	3°38'52
desc. node	-205 Jan 29 j 09:47	7°♌09'08		greatest brilliancy	-201 Dec 18 j 09:14	24°♍03'44	-1.3m
	-205 Mar 02 j 11:24	0°♌		direct	-200 Jan 27 j 07:14	14°♍27'54	
	-205 Apr 13 j 15:13	0°♍			-200 Mar 26 j 10:24	0°♍	
	-205 May 27 j 23:55	0°♌			-200 May 23 j 18:18	0°♌	
	-205 Jul 26 j 19:35	0°♄			-200 Jul 12 j 08:23	0°♍	
retrograde	-205 Aug 18 j 04:20	3°♄24'15			-200 Aug 26 j 16:55	0°♌	
	-205 Sep 09 j 01:57	30°♌		desc. node	-200 Sep 20 j 06:29	17°♌11'43	
min. Earth dist.	-205 Sep 14 j 17:25	28°♌14'18	0.44640 AU		-200 Oct 08 j 00:03	0°♍	
greatest brilliancy	-205 Sep 21 j 11:03	25°♌57'32	-2.4m	evening set	-200 Oct 20 j 21:35	9°♍30'32	
opposition	-205 Sep 22 j 19:47	25°♌29'38	-3°-36'-7	max. Earth dist.	-200 Nov 14 j 11:47	28°♍02'53	2.39467 AU
direct	-205 Oct 25 j 00:39	19°♌03'53			-200 Nov 17 j 01:04	0°♌	
asc. node	-205 Nov 29 j 06:26	26°♌00'05					
	-205 Dec 09 j 16:51	0°♄		conjunction	-200 Dec 19 j 04:01	24°♌54'10	0°-52'-10
	-204 Feb 06 j 21:33	0°♌		minimum elong	-200 Dec 19 j 01:23	24°♌49'00	0°52'09
	-204 Mar 29 j 04:45	0°♍			-200 Dec 25 j 16:03	0°♌	
	-204 May 17 j 15:02	0°♍			-199 Feb 01 j 18:12	0°♍	
	-204 Jul 04 j 19:22	0°♌		morning rise	-199 Feb 25 j 07:13	18°♍26'33	
evening set	-204 Jul 26 j 01:00	13°♌31'04			-199 Mar 12 j 05:08	0°♌	
max. Earth dist.	-204 Aug 20 j 07:03	29°♌53'21	2.61928 AU		-199 Apr 20 j 21:31	0°♄	
	-204 Aug 20 j 11:06	0°♍			-199 Jun 01 j 14:12	0°♌	
					-199 Jul 16 j 03:07	0°♍	
conjunction	-204 Sep 10 j 07:09	13°♍47'16	0°52'04	asc. node	-199 Jul 21 j 03:52	3°♍14'31	
minimum elong	-204 Sep 10 j 08:25	13°♍49'22	0°52'02		-199 Sep 03 j 02:04	0°♍	
	-204 Oct 04 j 06:39	0°♌			-199 Nov 04 j 03:26	0°♌	
morning rise	-204 Oct 27 j 02:53	15°♌48'24		retrograde	-199 Dec 12 j 07:55	7°♌33'21	
	-204 Nov 16 j 04:50	0°♍			-198 Jan 16 j 03:21	30°♍	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 21

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

opposition	-198 Jan 21 j 02:24	28° \mathfrak{G} 02'43	4°35'42		-193 Feb 19 j 09:06	0° Υ	
greatest brilliancy	-198 Jan 21 j 07:12	27° \mathfrak{G} 57'57	-1.2m	asc. node	-193 Mar 13 j 00:25	15° Υ 18'25	
min. Earth dist.	-198 Jan 22 j 09:12	27° \mathfrak{G} 32'03	0.67464 AU		-193 Apr 03 j 06:02	0° \mathfrak{B}	
direct	-198 Mar 03 j 03:09	18° \mathfrak{G} 06'48		evening set	-193 Apr 24 j 05:08	14° \mathfrak{B} 12'36	
	-198 Apr 22 j 04:08	0° \mathfrak{Q}			-193 May 17 j 23:03	0° \mathfrak{H}	
	-198 Jun 19 j 18:37	0° \mathfrak{M}					
	-198 Aug 06 j 07:24	0° \mathfrak{A}		conjunction	-193 Jun 14 j 01:03	17° \mathfrak{H} 41'04	0°48'53
desc. node	-198 Aug 08 j 05:25	1° \mathfrak{A} 17'09		minimum elong	-193 Jun 13 j 23:39	17° \mathfrak{H} 38'48	0°48'53
	-198 Sep 18 j 05:10	0° \mathfrak{M}		max. Earth dist.	-193 Jun 25 j 20:35	25° \mathfrak{H} 18'46	2.64949 AU
	-198 Oct 28 j 07:43	0° \mathfrak{X}			-193 Jul 03 j 03:35	0° \mathfrak{G}	
	-198 Dec 05 j 20:18	0° \mathfrak{Z}		morning rise	-193 Jul 31 j 03:15	17° \mathfrak{G} 52'10	
evening set	-198 Dec 24 j 04:54	14° \mathfrak{Z} 29'28			-193 Aug 19 j 06:16	0° \mathfrak{Q}	
	-197 Jan 12 j 20:24	0° \mathfrak{A}			-193 Oct 05 j 20:15	0° \mathfrak{M}	
	-197 Feb 20 j 07:27	0° \mathfrak{H}			-193 Nov 22 j 22:31	0° \mathfrak{A}	
					-192 Jan 11 j 12:43	0° \mathfrak{M}	
conjunction	-197 Mar 01 j 09:58	6° \mathfrak{H} 58'38	0°-54'-11		-192 Mar 06 j 17:02	0° \mathfrak{X}	
minimum elong	-197 Mar 01 j 12:48	7° \mathfrak{H} 04'02	0°54'11	desc. node	-192 Mar 30 j 03:19	10° \mathfrak{X} 03'25	
	-197 Apr 01 j 01:35	0° Υ		retrograde	-192 May 08 j 06:13	18° \mathfrak{X} 09'30	
max. Earth dist.	-197 Apr 20 j 03:59	13° Υ 56'37	2.44582 AU	opposition	-192 Jun 08 j 04:58	12° \mathfrak{X} 51'05	-4°-17'-6
morning rise	-197 May 05 j 03:00	24° Υ 38'03		greatest brilliancy	-192 Jun 09 j 07:13	12° \mathfrak{X} 32'22	-2.7m
	-197 May 12 j 17:44	0° \mathfrak{B}		min. Earth dist.	-192 Jun 13 j 17:10	11° \mathfrak{X} 17'02	0.39708 AU
asc. node	-197 Jun 08 j 02:17	18° \mathfrak{B} 10'33		direct	-192 Jul 10 j 21:25	6° \mathfrak{X} 49'50	
	-197 Jun 25 j 17:26	0° \mathfrak{H}			-192 Sep 14 j 23:08	0° \mathfrak{Z}	
	-197 Aug 11 j 08:05	0° \mathfrak{G}			-192 Nov 01 j 00:42	0° \mathfrak{A}	
	-197 Sep 30 j 13:36	0° \mathfrak{Q}			-192 Dec 14 j 16:02	0° \mathfrak{H}	
	-197 Nov 29 j 11:48	0° \mathfrak{M}		asc. node	-191 Jan 27 j 22:18	0° Υ 25'43	
retrograde	-196 Jan 18 j 07:49	11° \mathfrak{M} 44'43			-191 Jan 27 j 07:10	0° Υ	
opposition	-196 Feb 25 j 15:52	3° \mathfrak{M} 01'52	4°09'41		-191 Mar 12 j 23:28	0° \mathfrak{B}	
greatest brilliancy	-196 Feb 26 j 15:33	2° \mathfrak{M} 38'58	-1.4m		-191 Apr 27 j 22:13	0° \mathfrak{H}	
min. Earth dist.	-196 Mar 01 j 18:29	1° \mathfrak{M} 03'24	0.62859 AU	evening set	-191 Jun 04 j 13:27	24° \mathfrak{H} 06'59	
	-196 Mar 04 j 13:25	30° \mathfrak{R} \mathfrak{Q}			-191 Jun 13 j 19:06	0° \mathfrak{G}	
direct	-196 Apr 06 j 20:16	23° \mathfrak{Q} 03'46		max. Earth dist.	-191 Jul 18 j 14:21	22° \mathfrak{G} 08'28	2.67437 AU
	-196 May 12 j 15:40	0° \mathfrak{M}					
desc. node	-196 Jun 25 j 03:58	20° \mathfrak{M} 21'10		conjunction	-191 Jul 21 j 09:25	23° \mathfrak{G} 55'12	1°08'55
	-196 Jul 11 j 16:27	0° \mathfrak{A}		minimum elong	-191 Jul 21 j 09:03	23° \mathfrak{G} 54'37	1°08'56
	-196 Aug 26 j 05:54	0° \mathfrak{M}			-191 Jul 30 j 22:19	0° \mathfrak{Q}	
	-196 Oct 06 j 06:22	0° \mathfrak{X}		morning rise	-191 Sep 04 j 02:13	22° \mathfrak{Q} 32'12	
	-196 Nov 14 j 05:00	0° \mathfrak{Z}			-191 Sep 15 j 15:35	0° \mathfrak{M}	
	-196 Dec 22 j 12:38	0° \mathfrak{A}			-191 Oct 31 j 12:54	0° \mathfrak{A}	
	-195 Jan 30 j 08:04	0° \mathfrak{H}			-191 Dec 15 j 12:43	0° \mathfrak{M}	
evening set	-195 Mar 01 j 21:26	22° \mathfrak{H} 56'43			-190 Jan 28 j 19:34	0° \mathfrak{X}	
	-195 Mar 11 j 11:51	0° Υ		desc. node	-190 Feb 15 j 02:19	11° \mathfrak{X} 46'12	
	-195 Apr 22 j 12:54	0° \mathfrak{B}			-190 Mar 13 j 22:18	0° \mathfrak{Z}	
asc. node	-195 Apr 25 j 01:31	1° \mathfrak{B} 45'23			-190 Apr 28 j 11:31	0° \mathfrak{A}	
					-190 Jun 23 j 20:03	0° \mathfrak{H}	
conjunction	-195 Apr 29 j 19:20	5° \mathfrak{B} 02'25	0°02'56	retrograde	-190 Jul 25 j 12:16	6° \mathfrak{H} 27'11	
minimum elong	-195 Apr 29 j 19:12	5° \mathfrak{B} 02'10	0°02'56	min. Earth dist.	-190 Aug 21 j 03:49	1° \mathfrak{H} 55'24	0.40138 AU
behind sun begin	-195 Apr 28 j 20:12	4° \mathfrak{B} 22'28		greatest brilliancy	-190 Aug 26 j 03:06	0° \mathfrak{H} 25'31	-2.7m
behind sun end	-195 Apr 30 j 18:11	5° \mathfrak{B} 41'50		opposition	-190 Aug 27 j 16:23	29° \mathfrak{A} 57'16	-5°-46'-22
max. Earth dist.	-195 May 29 j 17:42	25° \mathfrak{B} 23'08	2.57065 AU		-190 Aug 27 j 12:46	30° \mathfrak{R} \mathfrak{A}	
	-195 Jun 05 j 15:46	0° \mathfrak{H}		direct	-190 Sep 27 j 00:34	24° \mathfrak{A} 27'23	
morning rise	-195 Jun 22 j 03:19	10° \mathfrak{H} 52'29			-190 Oct 27 j 19:22	0° \mathfrak{H}	
	-195 Jul 21 j 17:02	0° \mathfrak{G}		asc. node	-190 Dec 15 j 21:56	22° \mathfrak{H} 35'21	
	-195 Sep 07 j 12:45	0° \mathfrak{Q}			-190 Dec 29 j 04:43	0° Υ	
	-195 Oct 27 j 13:34	0° \mathfrak{M}			-189 Feb 17 j 17:43	0° \mathfrak{B}	
	-195 Dec 22 j 00:31	0° \mathfrak{A}			-189 Apr 07 j 14:09	0° \mathfrak{H}	
retrograde	-194 Mar 04 j 02:01	21° \mathfrak{A} 45'17			-189 May 25 j 23:19	0° \mathfrak{G}	
opposition	-194 Apr 08 j 13:05	14° \mathfrak{A} 23'19	1°42'12	evening set	-189 Jul 12 j 11:35	29° \mathfrak{G} 51'13	
greatest brilliancy	-194 Apr 09 j 09:03	14° \mathfrak{A} 05'29	-2.0m		-189 Jul 12 j 17:07	0° \mathfrak{Q}	
min. Earth dist.	-194 Apr 16 j 17:02	11° \mathfrak{A} 28'57	0.52167 AU	max. Earth dist.	-189 Aug 11 j 06:42	18° \mathfrak{Q} 56'14	2.64503 AU
desc. node	-194 May 13 j 02:59	5° \mathfrak{A} 31'28					
direct	-194 May 17 j 13:24	5° \mathfrak{A} 23'19		conjunction	-189 Aug 27 j 08:06	29° \mathfrak{Q} 22'44	1°02'08
	-194 Jul 26 j 21:24	0° \mathfrak{M}		minimum elong	-189 Aug 27 j 09:04	29° \mathfrak{Q} 24'19	1°02'07
	-194 Sep 10 j 22:33	0° \mathfrak{X}			-189 Aug 28 j 06:53	0° \mathfrak{M}	
	-194 Oct 21 j 20:55	0° \mathfrak{Z}		morning rise	-189 Oct 11 j 19:40	29° \mathfrak{M} 41'12	
	-194 Nov 30 j 10:24	0° \mathfrak{A}			-189 Oct 12 j 06:44	0° \mathfrak{A}	
	-193 Jan 09 j 06:35	0° \mathfrak{H}			-189 Nov 24 j 14:13	0° \mathfrak{M}	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 22

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

desc. node	-188 Jan 03 j 00:49	28° \mathbb{M} 17'38			-183 May 06 j 16:16	0° Ω	
	-188 Jan 05 j 09:00	0° \mathcal{X}			-183 Jun 28 j 20:45	0° \mathbb{M}	
	-188 Feb 15 j 00:06	0° \mathcal{Z}			-183 Aug 14 j 05:59	0° $\underline{\Omega}$	
	-188 Mar 26 j 02:21	0° \approx		desc. node	-183 Aug 24 j 21:21	7° $\underline{\Omega}$ 17'22	
	-188 May 05 j 17:45	0° \mathcal{H}			-183 Sep 25 j 19:51	0° \mathbb{M}	
	-188 Jun 18 j 03:30	0° \mathcal{Y}			-183 Nov 04 j 20:44	0° \mathcal{X}	
	-188 Aug 12 j 07:06	0° \mathcal{B}		evening set	-183 Nov 27 j 02:06	17° \mathcal{X} 12'32	
retrograde	-188 Sep 16 j 08:22	7° \mathcal{B} 35'56			-183 Dec 13 j 09:28	0° \mathcal{Z}	
min. Earth dist.	-188 Oct 17 j 03:24	1° \mathcal{B} 04'51	0.52550 AU		-182 Jan 20 j 09:39	0° \approx	
	-188 Oct 20 j 00:22	30° \mathcal{R} \mathcal{Y}					
opposition	-188 Oct 24 j 12:39	28° \mathcal{Y} 16'44	0°-24'-27	conjunction	-182 Feb 01 j 01:30	9° \approx 10'22	-1°-4'-58
greatest brilliancy	-188 Oct 24 j 08:32	28° \mathcal{Y} 20'39	-2.0m	minimum elong	-182 Feb 01 j 02:17	9° \approx 11'53	1°04'59
asc. node	-188 Nov 01 j 21:34	25° \mathcal{Y} 15'18			-182 Feb 27 j 19:43	0° \mathcal{H}	
direct	-188 Nov 28 j 11:15	20° \mathcal{Y} 34'12		max. Earth dist.	-182 Mar 20 j 00:42	15° \mathcal{H} 25'58	2.39415 AU
	-187 Jan 10 j 08:08	0° \mathcal{B}			-182 Apr 08 j 11:56	0° \mathcal{Y}	
	-187 Mar 13 j 07:35	0° \mathbb{I}		morning rise	-182 Apr 10 j 21:47	1° \mathcal{Y} 46'51	
	-187 May 04 j 14:51	0° \mathcal{S}			-182 May 20 j 02:31	0° \mathcal{B}	
	-187 Jun 22 j 22:17	0° Ω		asc. node	-182 Jun 24 j 18:56	24° \mathcal{B} 26'22	
	-187 Aug 08 j 22:51	0° \mathbb{M}			-182 Jul 03 j 03:56	0° \mathbb{I}	
evening set	-187 Aug 18 j 17:48	6° \mathbb{M} 26'12			-182 Aug 19 j 07:32	0° \mathcal{S}	
max. Earth dist.	-187 Sep 06 j 18:53	19° \mathbb{M} 09'37	2.56406 AU		-182 Oct 10 j 16:44	0° Ω	
	-187 Sep 22 j 16:28	0° $\underline{\Omega}$		retrograde	-181 Jan 03 j 07:17	28° Ω 16'35	
				opposition	-181 Feb 11 j 08:24	19° Ω 11'55	4°30'37
conjunction	-187 Oct 05 j 16:59	9° $\underline{\Omega}$ 01'31	0°27'28	greatest brilliancy	-181 Feb 12 j 01:24	18° Ω 55'13	-1.3m
minimum elong	-187 Oct 05 j 18:03	9° $\underline{\Omega}$ 03'24	0°27'27	min. Earth dist.	-181 Feb 14 j 23:24	17° Ω 46'33	0.65452 AU
	-187 Nov 04 j 05:35	0° \mathbb{M}		direct	-181 Mar 24 j 16:23	9° Ω 10'02	
desc. node	-187 Nov 20 j 00:08	11° \mathbb{M} 29'18			-181 Jun 01 j 04:00	0° \mathbb{M}	
morning rise	-187 Nov 25 j 07:15	15° \mathbb{M} 23'13		desc. node	-181 Jul 12 j 21:03	23° \mathbb{M} 39'17	
	-187 Dec 14 j 22:03	0° \mathcal{X}			-181 Jul 22 j 22:14	0° $\underline{\Omega}$	
	-186 Jan 23 j 06:58	0° \mathcal{Z}			-181 Sep 05 j 00:03	0° \mathbb{M}	
	-186 Mar 03 j 01:17	0° \approx			-181 Oct 15 j 12:18	0° \mathcal{X}	
	-186 Apr 11 j 01:46	0° \mathcal{H}			-181 Nov 23 j 04:56	0° \mathcal{Z}	
	-186 May 21 j 10:39	0° \mathcal{Y}			-181 Dec 31 j 08:05	0° \approx	
	-186 Jul 03 j 18:09	0° \mathcal{B}		evening set	-180 Feb 05 j 14:51	28° \approx 12'46	
	-186 Aug 23 j 02:34	0° \mathbb{I}			-180 Feb 07 j 22:46	0° \mathcal{H}	
asc. node	-186 Sep 19 j 20:07	12° \mathbb{I} 29'04			-180 Mar 18 j 21:21	0° \mathcal{Y}	
retrograde	-186 Oct 25 j 23:54	19° \mathbb{I} 54'13					
min. Earth dist.	-186 Nov 30 j 20:12	11° \mathbb{I} 34'10	0.62962 AU	conjunction	-180 Apr 08 j 14:34	15° \mathcal{Y} 02'33	0°-20'-15
opposition	-186 Dec 04 j 21:41	9° \mathbb{I} 56'30	2°53'36	minimum elong	-180 Apr 08 j 15:54	15° \mathcal{Y} 04'56	0°20'15
greatest brilliancy	-186 Dec 04 j 06:27	10° \mathbb{I} 11'46	-1.5m		-180 Apr 29 j 17:31	0° \mathcal{B}	
direct	-185 Jan 12 j 07:29	0° \mathbb{I} 53'30		asc. node	-180 May 11 j 16:51	8° \mathcal{B} 18'53	
	-185 Apr 09 j 15:17	0° \mathcal{S}		max. Earth dist.	-180 May 16 j 20:59	11° \mathcal{B} 52'11	2.52624 AU
	-185 Jun 02 j 10:15	0° Ω		morning rise	-180 Jun 04 j 19:19	24° \mathcal{B} 42'38	
	-185 Jul 20 j 21:35	0° \mathbb{M}			-180 Jun 12 j 17:17	0° \mathbb{I}	
	-185 Sep 03 j 22:35	0° $\underline{\Omega}$			-180 Jul 28 j 20:44	0° \mathcal{S}	
evening set	-185 Oct 01 j 14:29	19° $\underline{\Omega}$ 25'31			-180 Sep 15 j 06:53	0° Ω	
desc. node	-185 Oct 07 j 23:00	23° $\underline{\Omega}$ 59'34			-180 Nov 06 j 08:28	0° \mathbb{M}	
	-185 Oct 16 j 05:40	0° \mathbb{M}			-179 Jan 12 j 05:03	0° $\underline{\Omega}$	
max. Earth dist.	-185 Oct 17 j 10:45	0° \mathbb{M} 53'05	2.44293 AU	retrograde	-179 Feb 12 j 14:37	5° $\underline{\Omega}$ 09'47	
					-179 Mar 13 j 11:43	30° \mathcal{R} \mathbb{M}	
conjunction	-185 Nov 25 j 10:47	0° \mathcal{X} 02'23	0°-30'-37	opposition	-179 Mar 21 j 09:44	27° \mathbb{M} 10'32	2°59'15
minimum elong	-185 Nov 25 j 08:58	29° \mathbb{M} 58'54	0°30'37	greatest brilliancy	-179 Mar 22 j 12:57	26° \mathbb{M} 45'10	-1.7m
	-185 Nov 25 j 09:32	0° \mathcal{X}		min. Earth dist.	-179 Mar 28 j 14:06	24° \mathbb{M} 30'17	0.56997 AU
	-184 Jan 03 j 04:00	0° \mathcal{Z}		direct	-179 Apr 30 j 16:03	17° \mathbb{M} 36'17	
morning rise	-184 Jan 27 j 10:03	19° \mathcal{Z} 02'10		desc. node	-179 May 29 j 20:06	22° \mathbb{M} 36'18	
	-184 Feb 10 j 08:56	0° \approx			-179 Jun 17 j 20:02	0° $\underline{\Omega}$	
	-184 Mar 19 j 21:23	0° \mathcal{H}			-179 Aug 09 j 15:40	0° \mathbb{M}	
	-184 Apr 28 j 14:50	0° \mathcal{Y}			-179 Sep 21 j 13:20	0° \mathcal{X}	
	-184 Jun 09 j 11:00	0° \mathcal{B}			-179 Oct 31 j 07:55	0° \mathcal{Z}	
	-184 Jul 24 j 13:30	0° \mathbb{I}			-179 Dec 09 j 04:46	0° \approx	
asc. node	-184 Aug 06 j 19:07	8° \mathbb{I} 14'28			-178 Jan 17 j 11:39	0° \mathcal{H}	
	-184 Sep 13 j 20:09	0° \mathcal{S}			-178 Feb 27 j 02:22	0° \mathcal{Y}	
retrograde	-184 Nov 28 j 21:28	24° \mathcal{S} 48'33		asc. node	-178 Mar 29 j 15:32	21° \mathcal{Y} 43'31	
opposition	-183 Jan 07 j 22:00	15° \mathcal{S} 05'10	4°23'11	evening set	-178 Apr 05 j 05:42	26° \mathcal{Y} 19'02	
greatest brilliancy	-183 Jan 07 j 19:08	15° \mathcal{S} 08'03	-1.2m		-178 Apr 10 j 13:20	0° \mathcal{B}	
min. Earth dist.	-183 Jan 07 j 16:09	15° \mathcal{S} 11'02	0.67476 AU		-178 May 24 j 22:56	0° \mathbb{I}	
direct	-183 Feb 17 j 11:11	5° \mathcal{S} 18'47					

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 23

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

conjunction	-178 May 28 j 16:36	2°II28'12	0°34'01	retrograde	-173 Aug 29 j 21:55	17°Y04'32	
minimum elong	-178 May 28 j 15:16	2°II25'59	0°34'00	min. Earth dist.	-173 Sep 27 j 12:36	11°Y25'45	0.47440 AU
max. Earth dist.	-178 Jun 15 j 23:32	14°II27'45	2.62492 AU	opposition	-173 Oct 05 j 15:01	8°Y32'26	-2°-20'-53
	-178 Jul 10 j 00:24	0°S		greatest brilliancy	-173 Oct 04 j 15:55	8°Y53'10	-2.3m
morning rise	-178 Jul 16 j 16:02	4°S15'43		direct	-173 Nov 07 j 20:57	1°Y36'47	
	-178 Aug 26 j 06:51	0°Q		asc. node	-173 Nov 19 j 12:41	2°Y28'39	
	-178 Oct 13 j 12:33	0°P			-172 Jan 29 j 16:40	0°X	
	-178 Dec 02 j 07:31	0°A			-172 Mar 23 j 06:53	0°II	
	-177 Jan 25 j 17:55	0°M			-172 May 12 j 12:58	0°S	
retrograde	-177 Apr 10 j 02:03	23°M20'01			-172 Jun 30 j 01:53	0°Q	
desc. node	-177 Apr 16 j 18:39	23°M03'26		evening set	-172 Aug 03 j 12:50	21°Q58'43	
opposition	-177 May 12 j 21:39	17°M12'05	-1°-31'-51		-172 Aug 15 j 20:31	0°P	
greatest brilliancy	-177 May 13 j 14:03	16°M59'05	-2.4m	max. Earth dist.	-172 Aug 26 j 09:27	6°P56'11	2.60147 AU
min. Earth dist.	-177 May 20 j 22:47	14°M39'42	0.44118 AU				
direct	-177 Jun 17 j 14:50	9°M47'46		conjunction	-172 Sep 19 j 05:59	22°P54'42	0°44'14
	-177 Aug 17 j 10:05	0°X		minimum elong	-172 Sep 19 j 07:17	22°P56'55	0°44'12
	-177 Oct 03 j 08:35	0°Z			-172 Sep 29 j 15:31	0°A	
	-177 Nov 14 j 09:39	0°≈		morning rise	-172 Nov 06 j 03:45	26°A13'32	
	-177 Dec 25 j 19:22	0°H			-172 Nov 11 j 10:31	0°M	
	-176 Feb 06 j 01:32	0°Y		desc. node	-172 Dec 06 j 15:50	18°M18'07	
asc. node	-176 Feb 14 j 15:08	5°Y57'40			-172 Dec 22 j 11:36	0°X	
	-176 Mar 20 j 19:39	0°X			-171 Jan 31 j 05:58	0°Z	
	-176 May 05 j 03:33	0°II			-171 Mar 11 j 09:30	0°≈	
evening set	-176 May 19 j 21:49	9°II35'02			-171 Apr 19 j 19:33	0°H	
	-176 Jun 20 j 16:04	0°S			-171 May 30 j 19:02	0°Y	
					-171 Jul 14 j 17:11	0°X	
conjunction	-176 Jul 06 j 22:07	10°S22'33	1°04'19		-171 Sep 12 j 23:19	0°II	
minimum elong	-176 Jul 06 j 21:13	10°S21'08	1°04'20	asc. node	-171 Oct 06 j 11:58	4°II47'50	
max. Earth dist.	-176 Jul 09 j 16:27	12°S08'17	2.67109 AU	retrograde	-171 Oct 11 j 12:20	4°II58'14	
	-176 Aug 06 j 17:25	0°Q			-171 Nov 07 j 05:37	30°R8	
morning rise	-176 Aug 21 j 04:35	9°Q13'20		min. Earth dist.	-171 Nov 14 j 12:30	27°R16'32	0.59504 AU
	-176 Sep 22 j 16:15	0°P		greatest brilliancy	-171 Nov 19 j 10:20	25°R19'44	-1.6m
	-176 Nov 08 j 04:51	0°A		opposition	-171 Nov 20 j 00:18	25°R05'53	1°52'31
	-176 Dec 24 j 09:12	0°M		direct	-171 Dec 27 j 05:24	16°R28'51	
	-175 Feb 08 j 17:46	0°X			-170 Feb 19 j 03:16	0°II	
desc. node	-175 Mar 03 j 18:14	14°X36'50			-170 Apr 20 j 00:46	0°S	
	-175 Mar 28 j 20:08	0°Z			-170 Jun 10 j 10:40	0°Q	
	-175 May 27 j 11:19	0°≈			-170 Jul 28 j 04:36	0°P	
retrograde	-175 Jun 27 j 09:06	5°≈47'00			-170 Sep 11 j 01:21	0°A	
min. Earth dist.	-175 Jul 25 j 16:47	1°≈09'44	0.37644 AU	evening set	-170 Sep 13 j 09:46	1°A37'21	
greatest brilliancy	-175 Jul 27 j 11:43	0°≈40'50	-2.9m	max. Earth dist.	-170 Sep 28 j 12:39	12°A10'36	2.49323 AU
opposition	-175 Jul 28 j 02:30	0°≈30'52	-6°-52'-37		-170 Oct 23 j 09:50	0°M	
	-175 Jul 30 j 00:24	30°R8		desc. node	-170 Oct 24 j 15:34	0°M54'07	
direct	-175 Aug 26 j 17:36	25°Z34'33					
	-175 Sep 22 j 12:38	0°≈		conjunction	-170 Nov 03 j 19:56	8°M21'49	0°-6'-34
	-175 Nov 23 j 07:31	0°H		minimum elong	-170 Nov 03 j 19:35	8°M21'11	0°06'34
asc. node	-174 Jan 01 j 14:09	24°H05'08		behind sun begin	-170 Nov 02 j 22:28	7°M42'17	
	-174 Jan 10 j 23:02	0°Y		behind sun end	-170 Nov 04 j 16:43	9°M00'08	
	-174 Feb 27 j 03:20	0°X			-170 Dec 02 j 17:42	0°X	
	-174 Apr 15 j 11:45	0°II		morning rise	-170 Dec 31 j 02:48	21°X46'51	
	-174 Jun 02 j 03:02	0°S			-169 Jan 10 j 16:42	0°Z	
evening set	-174 Jun 27 j 22:56	16°S17'44			-169 Feb 18 j 01:40	0°≈	
	-174 Jul 19 j 13:16	0°Q			-169 Mar 28 j 17:14	0°H	
max. Earth dist.	-174 Aug 01 j 20:31	8°Q29'54	2.66279 AU		-169 May 07 j 13:53	0°Y	
					-169 Jun 18 j 17:28	0°X	
conjunction	-174 Aug 12 j 20:46	15°Q34'13	1°07'59		-169 Aug 03 j 20:27	0°II	
minimum elong	-174 Aug 12 j 21:16	15°Q35'01	1°07'59	asc. node	-169 Aug 24 j 10:48	12°II04'37	
	-174 Sep 04 j 02:55	0°P			-169 Sep 29 j 06:09	0°S	
morning rise	-174 Sep 26 j 15:21	14°P48'18		retrograde	-169 Nov 16 j 12:52	11°S51'58	
	-174 Oct 19 j 09:21	0°A		min. Earth dist.	-169 Dec 24 j 21:32	2°S41'57	0.66483 AU
	-174 Dec 02 j 05:13	0°M		opposition	-169 Dec 26 j 15:51	1°S59'25	3°58'48
	-173 Jan 13 j 17:26	0°X		greatest brilliancy	-169 Dec 26 j 06:22	2°S08'57	-1.3m
desc. node	-173 Jan 19 j 17:12	4°X17'36			-169 Dec 31 j 16:06	30°RII	
	-173 Feb 24 j 05:48	0°Z		direct	-168 Feb 04 j 12:48	22°II26'47	
	-173 Apr 06 j 10:26	0°≈			-168 Mar 14 j 10:23	0°S	
	-173 May 18 j 19:25	0°H			-168 May 17 j 12:46	0°Q	
	-173 Jul 06 j 04:21	0°Y			-168 Jul 07 j 03:45	0°P	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 24

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-168 Aug 21 j 20:42	0°♄		behind sun begin	-163 May 10 j 12:40	15°♄36'27	
desc. node	-168 Sep 10 j 14:35	13°♄43'10		behind sun end	-163 May 11 j 00:34	15°♄56'37	
	-168 Oct 03 j 06:34	0°♍			-163 May 31 j 23:07	0°♎	
evening set	-168 Nov 02 j 11:03	22°♍28'52		max. Earth dist.	-163 Jun 05 j 09:11	2°♎55'52	2.59209 AU
	-168 Nov 12 j 07:48	0°♎		morning rise	-163 Jul 01 j 09:01	19°♎57'13	
max. Earth dist.	-168 Dec 15 j 21:51	26°♎04'23	2.37542 AU		-163 Jul 16 j 23:13	0°♏	
	-168 Dec 20 j 21:50	0°♏			-163 Sep 02 j 12:17	0°♐	
					-163 Oct 21 j 17:23	0°♑	
conjunction	-167 Jan 03 j 10:03	10°♏38'26	-1°00'-43		-163 Dec 13 j 08:38	0°♒	
minimum elong	-167 Jan 03 j 07:58	10°♏34'21	1°00'43		-162 Feb 22 j 19:09	0°♓	
	-167 Jan 27 j 22:49	0°♑		retrograde	-162 Mar 16 j 07:30	2°♓36'02	
	-167 Mar 07 j 08:36	0°♒			-162 Apr 05 j 18:20	30°♓♄	
morning rise	-167 Mar 14 j 03:01	5°♒12'26		opposition	-162 Apr 19 j 23:16	25°♄37'59	0°42'40
	-167 Apr 15 j 23:39	0°♓		greatest brilliancy	-162 Apr 20 j 08:45	25°♄29'48	-2.1m
	-167 May 27 j 14:04	0°♄		min. Earth dist.	-162 Apr 28 j 10:43	22°♄43'14	0.49320 AU
	-167 Jul 10 j 20:18	0°♎		desc. node	-162 May 03 j 11:01	21°♄07'08	
asc. node	-167 Jul 11 j 09:20	0°♎21'18		direct	-162 May 28 j 00:51	17°♄05'24	
	-167 Aug 27 j 21:39	0°♏			-162 Jul 14 j 17:05	0°♍	
	-167 Oct 23 j 11:33	0°♐			-162 Sep 03 j 07:53	0°♎	
retrograde	-167 Dec 20 j 04:58	15°♐21'19			-162 Oct 15 j 11:02	0°♏	
opposition	-166 Jan 28 j 18:18	5°♐58'56	4°37'23		-162 Nov 24 j 14:44	0°♑	
greatest brilliancy	-166 Jan 29 j 03:28	5°♐49'50	-1.2m		-161 Jan 03 j 20:33	0°♒	
min. Earth dist.	-166 Jan 30 j 20:58	5°♐08'42	0.67034 AU		-161 Feb 14 j 06:14	0°♓	
	-166 Feb 14 j 00:04	30°♓♏		asc. node	-161 Mar 03 j 06:33	11°♓59'22	
direct	-166 Mar 10 j 23:06	25°♏59'40			-161 Mar 29 j 08:56	0°♄	
	-166 Apr 07 j 03:28	0°♐		evening set	-161 May 04 j 06:47	24°♄05'32	
	-166 Jun 13 j 04:36	0°♑			-161 May 13 j 05:53	0°♎	
desc. node	-166 Jul 29 j 12:53	28°♑27'26					
	-166 Jul 31 j 21:04	0°♒		conjunction	-161 Jun 22 j 22:50	26°♎25'33	0°55'43
	-166 Sep 13 j 03:49	0°♓		minimum elong	-161 Jun 22 j 21:33	26°♎23'29	0°55'43
	-166 Oct 23 j 09:50	0°♄			-161 Jun 28 j 12:25	0°♏	
	-166 Nov 30 j 23:46	0°♏		max. Earth dist.	-161 Jul 01 j 08:43	1°♏49'31	2.65949 AU
greatest brilliancy	-165 Jan 02 j 23:08	26°♏00'41	1.2m	morning rise	-161 Aug 08 j 06:00	25°♏59'08	
evening set	-165 Jan 08 j 23:46	0°♑45'28			-161 Aug 14 j 13:43	0°♐	
	-165 Jan 08 j 00:39	0°♑			-161 Sep 30 j 21:00	0°♑	
	-165 Feb 15 j 12:19	0°♒			-161 Nov 17 j 06:59	0°♒	
					-160 Jan 04 j 07:19	0°♓	
conjunction	-165 Mar 16 j 09:09	21°♒53'55	0°-43'-13		-160 Feb 23 j 16:17	0°♄	
minimum elong	-165 Mar 16 j 11:54	21°♒59'03	0°43'13	desc. node	-160 Mar 20 j 09:48	13°♄51'56	
	-165 Mar 27 j 06:54	0°♓			-160 Apr 27 j 18:21	0°♏	
max. Earth dist.	-165 May 01 j 21:53	25°♓44'16	2.47522 AU	retrograde	-160 May 26 j 03:51	4°♏39'10	
	-165 May 07 j 23:10	0°♄			-160 Jun 24 j 03:45	30°♓♎	
morning rise	-165 May 17 j 08:32	6°♄33'03		opposition	-160 Jun 25 j 13:00	29°♄37'34	-5°-43'-13
asc. node	-165 May 29 j 09:06	14°♄49'40		greatest brilliancy	-160 Jun 26 j 06:41	29°♄25'37	-2.8m
	-165 Jun 20 j 21:10	0°♎		min. Earth dist.	-160 Jun 28 j 13:04	28°♄48'56	0.38166 AU
	-165 Aug 06 j 05:36	0°♏		direct	-160 Jul 26 j 12:47	24°♄15'28	
	-165 Sep 24 j 14:12	0°♐			-160 Aug 25 j 20:13	0°♏	
	-165 Nov 19 j 07:49	0°♑			-160 Oct 22 j 12:03	0°♑	
retrograde	-164 Jan 27 j 10:17	20°♑15'05			-160 Dec 07 j 13:43	0°♒	
opposition	-164 Mar 05 j 06:44	11°♑46'02	3°49'37	asc. node	-159 Jan 18 j 05:44	27°♒55'07	
greatest brilliancy	-164 Mar 06 j 08:52	11°♑21'00	-1.5m		-159 Jan 21 j 08:27	0°♓	
min. Earth dist.	-164 Mar 11 j 03:58	9°♑31'02	0.61021 AU		-159 Mar 07 j 16:38	0°♄	
direct	-164 Apr 15 j 05:54	1°♑53'23			-159 Apr 23 j 00:46	0°♎	
desc. node	-164 Jun 15 j 11:45	19°♑59'26			-159 Jun 09 j 03:06	0°♏	
	-164 Jul 04 j 02:33	0°♒		evening set	-159 Jun 13 j 04:36	2°♏34'42	
	-164 Aug 20 j 06:13	0°♓		max. Earth dist.	-159 Jul 23 j 19:58	28°♏23'50	2.67254 AU
	-164 Sep 30 j 19:08	0°♄			-159 Jul 26 j 08:19	0°♐	
	-164 Nov 08 j 23:22	0°♏					
	-164 Dec 17 j 10:42	0°♑		conjunction	-159 Jul 29 j 13:48	2°♐03'35	1°09'45
	-163 Jan 25 j 09:11	0°♒		minimum elong	-159 Jul 29 j 13:45	2°♐03'30	1°09'46
	-163 Mar 06 j 15:40	0°♓			-159 Sep 10 j 23:59	0°♑	
evening set	-163 Mar 15 j 00:22	6°♓04'02		morning rise	-159 Sep 12 j 04:04	0°♑45'36	
asc. node	-163 Apr 15 j 08:16	28°♓17'34			-159 Oct 26 j 15:27	0°♒	
	-163 Apr 17 j 19:08	0°♄			-159 Dec 10 j 03:42	0°♓	
					-158 Jan 22 j 16:14	0°♄	
conjunction	-163 May 10 j 19:24	15°♄47'51	0°15'14	desc. node	-158 Feb 05 j 09:29	9°♄34'00	
minimum elong	-163 May 10 j 18:37	15°♄46'32	0°15'13		-158 Mar 06 j 13:53	0°♏	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 25

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-158 Apr 18 j 20:23	0°♊		desc. node	-153 Sep 28 j 06:25	20°♊23'43	
	-158 Jun 04 j 20:00	0°♋			-153 Oct 11 j 13:09	0°♌	
retrograde	-158 Aug 08 j 11:19	22°♋39'47		evening set	-153 Oct 12 j 19:25	0°♌55'16	
min. Earth dist.	-158 Sep 04 j 08:29	17°♋50'02	0.42489 AU	max. Earth dist.	-153 Oct 31 j 13:27	14°♌47'16	2.41528 AU
greatest brilliancy	-158 Sep 10 j 11:54	15°♋51'21	-2.5m		-153 Nov 20 j 16:22	0°♍	
opposition	-158 Sep 12 j 01:06	15°♋21'10	-4°-34'-43				
direct	-158 Oct 13 j 09:20	9°♋20'43		conjunction	-153 Dec 08 j 23:54	14°♍05'53	0°-43'-33
asc. node	-158 Dec 06 j 05:02	23°♋57'59		minimum elong	-153 Dec 08 j 21:25	14°♍01'04	0°43'34
	-158 Dec 18 j 19:37	0°♌			-153 Dec 29 j 09:16	0°♎	
	-157 Feb 11 j 01:31	0°♍			-152 Feb 05 j 12:37	0°♏	
	-157 Apr 02 j 03:24	0°♎		morning rise	-152 Feb 13 j 02:06	5°♏56'20	
	-157 May 21 j 01:53	0°♏			-152 Mar 14 j 23:44	0°♐	
	-157 Jul 08 j 01:45	0°♑			-152 Apr 23 j 15:24	0°♑	
evening set	-157 Jul 20 j 18:59	8°♑04'59			-152 Jun 04 j 07:50	0°♒	
max. Earth dist.	-157 Aug 16 j 23:07	25°♑35'26	2.63186 AU		-152 Jul 18 j 23:36	0°♓	
	-157 Aug 23 j 17:13	0°♒		asc. node	-152 Jul 28 j 02:36	5°♓48'57	
					-152 Sep 06 j 14:45	0°♔	
conjunction	-157 Sep 04 j 19:17	7°♒57'01	0°56'47		-152 Nov 15 j 06:19	0°♕	
minimum elong	-157 Sep 04 j 20:27	7°♒58'56	0°56'47	retrograde	-152 Dec 06 j 14:12	2°♕36'12	
	-157 Oct 07 j 15:40	0°♓			-152 Dec 26 j 10:30	30°♕	
morning rise	-157 Oct 20 j 22:29	9°♓06'43		opposition	-151 Jan 15 j 11:57	22°♓59'19	4°31'49
	-157 Nov 19 j 18:40	0°♔		greatest brilliancy	-151 Jan 15 j 13:09	22°♓58'06	-1.2m
desc. node	-157 Dec 24 j 09:09	24°♔56'21		min. Earth dist.	-151 Jan 16 j 01:53	22°♓45'23	0.67598 AU
	-157 Dec 31 j 06:49	0°♕		direct	-151 Feb 25 j 08:21	13°♓07'18	
	-156 Feb 09 j 13:25	0°♖			-151 Apr 28 j 01:52	0°♔	
	-156 Mar 20 j 05:38	0°♗			-151 Jun 23 j 01:07	0°♕	
	-156 Apr 29 j 06:50	0°♘			-151 Aug 09 j 03:09	0°♖	
	-156 Jun 10 j 09:48	0°♙		desc. node	-151 Aug 15 j 05:15	4°♖07'14	
	-156 Jul 29 j 04:19	0°♚			-151 Sep 20 j 22:41	0°♗	
retrograde	-156 Sep 25 j 22:45	18°♚27'39			-151 Oct 31 j 01:28	0°♘	
asc. node	-156 Oct 23 j 02:53	13°♚16'10			-151 Dec 08 j 14:23	0°♙	
min. Earth dist.	-156 Oct 27 j 22:36	11°♚29'39	0.55227 AU	evening set	-151 Dec 12 j 02:42	2°♙46'05	
opposition	-156 Nov 03 j 17:29	8°♚51'48	0°32'16		-150 Jan 15 j 14:18	0°♚	
greatest brilliancy	-156 Nov 03 j 12:02	8°♚57'05	-1.8m				
direct	-156 Dec 09 j 12:48	0°♚47'28		conjunction	-150 Feb 17 j 05:49	25°♚32'33	-1°00'-26
	-155 Mar 05 j 21:10	0°♓		minimum elong	-150 Feb 17 j 08:07	25°♚37'00	1°00'27
	-155 Apr 29 j 01:33	0°♔			-150 Feb 23 j 00:18	0°♋	
	-155 Jun 18 j 00:25	0°♑			-150 Apr 03 j 16:24	0°♌	
	-155 Aug 04 j 06:49	0°♒		max. Earth dist.	-150 Apr 08 j 22:32	3°♌52'41	2.42189 AU
evening set	-155 Aug 27 j 18:16	15°♒31'12		morning rise	-150 Apr 25 j 01:33	15°♌37'10	
max. Earth dist.	-155 Sep 14 j 01:26	27°♒14'20	2.54058 AU		-150 May 15 j 06:26	0°♍	
	-155 Sep 18 j 01:58	0°♓		asc. node	-150 Jun 15 j 00:59	21°♍11'23	
					-150 Jun 28 j 05:05	0°♔	
conjunction	-155 Oct 15 j 16:52	19°♓19'38	0°16'00		-150 Aug 13 j 22:53	0°♕	
minimum elong	-155 Oct 15 j 17:36	19°♓20'54	0°15'59		-150 Oct 03 j 20:16	0°♌	
behind sun begin	-155 Oct 15 j 13:53	19°♓14'19			-150 Dec 07 j 13:55	0°♍	
behind sun end	-155 Oct 15 j 21:18	19°♓27'29		retrograde	-149 Jan 11 j 18:54	6°♍23'07	
	-155 Oct 30 j 13:48	0°♎			-149 Feb 12 j 20:57	30°♎	
desc. node	-155 Nov 10 j 07:52	7°♎49'39		opposition	-149 Feb 19 j 11:01	27°♎29'52	4°20'01
morning rise	-155 Dec 07 j 06:50	27°♎50'34		greatest brilliancy	-149 Feb 20 j 07:48	27°♎09'37	-1.4m
	-155 Dec 10 j 03:35	0°♏		min. Earth dist.	-149 Feb 23 j 21:29	25°♎46'13	0.64141 AU
	-154 Jan 18 j 08:59	0°♐		direct	-149 Apr 01 j 17:44	17°♎29'22	
	-154 Feb 25 j 23:34	0°♑			-149 May 22 j 00:34	0°♒	
	-154 Apr 05 j 19:58	0°♒		desc. node	-149 Jul 03 j 04:06	21°♒52'07	
	-154 May 15 j 22:22	0°♓			-149 Jul 16 j 14:16	0°♓	
	-154 Jun 27 j 15:15	0°♔			-149 Aug 30 j 12:15	0°♔	
	-154 Aug 14 j 17:01	0°♕			-149 Oct 10 j 08:13	0°♕	
asc. node	-154 Sep 10 j 02:21	13°♕42'42			-149 Nov 18 j 04:25	0°♖	
retrograde	-154 Nov 02 j 23:34	28°♕25'29			-149 Dec 26 j 09:46	0°♗	
min. Earth dist.	-154 Dec 09 j 18:22	19°♕46'46	0.64478 AU		-148 Feb 03 j 02:18	0°♘	
greatest brilliancy	-154 Dec 12 j 10:41	18°♕42'10	-1.4m	evening set	-148 Feb 20 j 05:17	12°♘59'40	
opposition	-154 Dec 13 j 00:50	18°♕27'58	3°21'52		-148 Mar 14 j 02:26	0°♙	
direct	-153 Jan 21 j 00:56	9°♕13'10					
	-153 Apr 01 j 15:10	0°♖		conjunction	-148 Apr 20 j 22:55	27°♙10'16	0°-6'-48
	-153 May 27 j 18:58	0°♑		minimum elong	-148 Apr 20 j 23:20	27°♙11'01	0°06'48
	-153 Jul 15 j 22:13	0°♒		behind sun begin	-148 Apr 20 j 01:17	26°♙32'19	
	-153 Aug 30 j 04:53	0°♓		behind sun end	-148 Apr 21 j 21:23	27°♙49'40	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 26

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-148 Apr 24 j 23:53	0°♄				-143 May 06 j 18:53	0°♁	
asc. node	-148 May 01 j 23:41	4°♄51'55		retrograde		-143 Jul 13 j 18:52	23°♁47'06	
max. Earth dist.	-148 May 24 j 15:58	20°♄23'11	2.55160 AU	min. Earth dist.		-143 Aug 09 j 18:38	19°♁20'35	0.38680 AU
	-148 Jun 07 j 23:50	0°♂		greatest brilliancy		-143 Aug 13 j 12:06	18°♁16'50	-2.8m
morning rise	-148 Jun 14 j 21:34	4°♂35'02		opposition		-143 Aug 14 j 18:37	17°♁55'00	-6°-28'-44
	-148 Jul 24 j 00:40	0°♂		direct		-143 Sep 13 j 14:10	12°♁45'18	
	-148 Sep 10 j 00:44	0°♂				-143 Nov 10 j 20:23	0°♂	
	-148 Oct 30 j 18:01	0°♂		asc. node		-143 Dec 22 j 19:54	23°♂05'59	
	-148 Dec 28 j 03:52	0°♂				-142 Jan 03 j 09:47	0°♂	
retrograde	-147 Feb 23 j 08:09	14°♂50'14				-142 Feb 21 j 04:29	0°♂	
opposition	-147 Mar 31 j 10:48	7°♂10'32	2°18'24			-142 Apr 10 j 07:03	0°♂	
greatest brilliancy	-147 Apr 01 j 11:04	6°♂48'25	-1.8m			-142 May 28 j 07:49	0°♂	
min. Earth dist.	-147 Apr 08 j 05:50	4°♂20'34	0.54397 AU	evening set		-142 Jul 06 j 07:35	24°♂32'05	
	-147 Apr 22 j 12:04	30°♂				-142 Jul 14 j 22:20	0°♂	
direct	-147 May 10 j 02:14	27°♂53'09		max. Earth dist.		-142 Aug 07 j 06:47	14°♂55'57	2.65401 AU
desc. node	-147 May 20 j 02:50	28°♂32'15						
	-147 May 28 j 10:34	0°♂		conjunction		-142 Aug 21 j 03:04	23°♂52'44	1°05'04
	-147 Aug 01 j 17:37	0°♂		minimum elong		-142 Aug 21 j 03:51	23°♂54'01	1°05'04
	-147 Sep 15 j 04:07	0°♂				-142 Aug 30 j 12:36	0°♂	
	-147 Oct 25 j 13:03	0°♂		morning rise		-142 Oct 05 j 05:00	23°♂37'30	
	-147 Dec 03 j 18:10	0°♂				-142 Oct 14 j 16:06	0°♂	
	-146 Jan 12 j 07:23	0°♂				-142 Nov 27 j 05:32	0°♂	
	-146 Feb 22 j 03:11	0°♂				-141 Jan 08 j 08:20	0°♂	
asc. node	-146 Mar 19 j 23:07	18°♂20'22		desc. node		-141 Jan 10 j 00:43	1°♂13'03	
	-146 Apr 05 j 18:17	0°♂				-141 Feb 18 j 08:27	0°♂	
evening set	-146 Apr 16 j 06:16	7°♂11'16				-141 Mar 30 j 20:49	0°♂	
	-146 May 20 j 06:37	0°♂				-141 May 11 j 02:11	0°♂	
						-141 Jun 24 j 20:17	0°♂	
conjunction	-146 Jun 07 j 04:15	11°♂45'17	0°43'06	retrograde		-141 Sep 09 j 16:40	29°♂33'14	
minimum elong	-146 Jun 07 j 02:49	11°♂42'58	0°43'05	min. Earth dist.		-141 Oct 09 j 12:33	23°♂24'58	0.50281 AU
max. Earth dist.	-146 Jun 21 j 18:32	21°♂14'18	2.63951 AU	opposition		-141 Oct 17 j 07:07	20°♂31'56	-1°-11'-16
	-146 Jul 05 j 08:51	0°♂		greatest brilliancy		-141 Oct 16 j 19:00	20°♂43'12	-2.1m
morning rise	-146 Jul 25 j 00:40	12°♂34'24		asc. node		-141 Nov 09 j 19:45	13°♂55'43	
	-146 Aug 21 j 12:21	0°♂		direct		-141 Nov 20 j 11:19	13°♂09'18	
	-146 Oct 08 j 08:22	0°♂				-140 Jan 19 j 14:25	0°♂	
	-146 Nov 26 j 01:58	0°♂				-140 Mar 16 j 23:13	0°♂	
	-145 Jan 16 j 06:40	0°♂				-140 May 07 j 07:22	0°♂	
	-145 Mar 20 j 00:16	0°♂				-140 Jun 25 j 06:53	0°♂	
desc. node	-145 Apr 07 j 02:51	5°♂09'16				-140 Aug 11 j 05:44	0°♂	
retrograde	-145 Apr 26 j 00:43	7°♂12'47		evening set		-140 Aug 12 j 03:52	0°♂36'12	
opposition	-145 May 27 j 17:07	1°♂33'42	-3°-4'00	max. Earth dist.		-140 Sep 01 j 19:28	14°♂15'37	2.58177 AU
greatest brilliancy	-145 May 28 j 18:46	1°♂14'29	-2.6m			-140 Sep 25 j 01:09	0°♂	
	-145 Jun 01 j 22:02	30°♂						
min. Earth dist.	-145 Jun 03 j 15:43	29°♂29'14	0.41483 AU	conjunction		-140 Sep 28 j 11:30	2°♂21'32	0°35'03
direct	-145 Jun 30 j 19:32	24°♂54'59		minimum elong		-140 Sep 28 j 12:44	2°♂23'39	0°35'02
	-145 Jul 28 j 19:37	0°♂				-140 Nov 06 j 17:47	0°♂	
	-145 Sep 24 j 00:00	0°♂		morning rise		-140 Nov 16 j 17:36	7°♂13'21	
	-145 Nov 07 j 04:05	0°♂		desc. node		-140 Nov 26 j 23:55	14°♂43'06	
	-145 Dec 19 j 14:43	0°♂				-140 Dec 17 j 14:48	0°♂	
	-144 Jan 31 j 12:31	0°♂				-139 Jan 26 j 04:11	0°♂	
asc. node	-144 Feb 04 j 20:58	2°♂59'57				-139 Mar 06 j 02:15	0°♂	
	-144 Mar 15 j 17:10	0°♂				-139 Apr 14 j 06:06	0°♂	
	-144 Apr 30 j 08:03	0°♂				-139 May 24 j 19:09	0°♂	
evening set	-144 May 28 j 23:19	18°♂27'25				-139 Jul 07 j 13:44	0°♂	
	-144 Jun 16 j 00:36	0°♂				-139 Aug 29 j 05:17	0°♂	
				asc. node		-139 Sep 26 j 18:40	10°♂48'38	
conjunction	-144 Jul 15 j 06:17	18°♂37'39	1°07'28	retrograde		-139 Oct 19 j 21:59	14°♂07'11	
minimum elong	-144 Jul 15 j 05:41	18°♂36'41	1°07'29	min. Earth dist.		-139 Nov 23 j 23:04	6°♂04'00	0.61530 AU
max. Earth dist.	-144 Jul 14 j 22:58	18°♂26'00	2.67404 AU	opposition		-139 Nov 28 j 16:37	4°♂10'43	2°30'13
	-144 Aug 02 j 02:42	0°♂		greatest brilliancy		-139 Nov 28 j 01:05	4°♂26'12	-1.5m
morning rise	-144 Aug 29 j 03:37	17°♂16'52				-139 Dec 09 j 20:13	30°♂	
	-144 Sep 17 j 22:32	0°♂		direct		-138 Jan 05 j 14:35	25°♂18'39	
	-144 Nov 03 j 02:40	0°♂				-138 Feb 04 j 04:50	0°♂	
	-144 Dec 18 j 14:17	0°♂				-138 Apr 13 j 10:46	0°♂	
	-143 Feb 01 j 16:29	0°♂				-138 Jun 05 j 03:55	0°♂	
desc. node	-143 Feb 22 j 02:07	13°♂33'00				-138 Jul 23 j 08:39	0°♂	
	-143 Mar 19 j 03:21	0°♂				-138 Sep 06 j 09:15	0°♂	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 27

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

evening set	-138 Sep 23 j 13:01	11°♄56'38			-133 Aug 01 j 06:26	0°♄	
max. Earth dist.	-138 Oct 08 j 12:29	22°♄35'49	2.46574 AU		-133 Sep 18 j 23:33	0°♄	
desc. node	-138 Oct 14 j 22:45	27°♄14'05			-133 Nov 11 j 05:09	0°♄	
	-138 Oct 18 j 18:08	0°♄		retrograde	-132 Feb 05 j 23:19	29°♄03'23	
				opposition	-132 Mar 14 j 06:51	20°♄49'46	3°22'56
conjunction	-138 Nov 15 j 17:10	20°♄41'18	0°-20'-18	greatest brilliancy	-132 Mar 15 j 10:03	20°♄24'04	-1.6m
minimum elong	-138 Nov 15 j 15:59	20°♄39'05	0°20'18	min. Earth dist.	-132 Mar 20 j 21:46	18°♄20'01	0.58916 AU
	-138 Nov 28 j 00:47	0°♄		direct	-132 Apr 23 j 22:07	11°♄05'47	
	-137 Jan 05 j 21:45	0°♄		desc. node	-132 Jun 05 j 20:06	21°♄02'16	
morning rise	-137 Jan 15 j 01:38	7°♄09'53			-132 Jun 25 j 00:52	0°♄	
	-137 Feb 13 j 04:19	0°♄			-132 Aug 13 j 20:31	0°♄	
greatest brilliancy	-137 Feb 27 j 04:23	10°♄57'26	1.2m		-132 Sep 25 j 02:57	0°♄	
	-137 Mar 23 j 17:33	0°♄			-132 Nov 03 j 14:55	0°♄	
	-137 May 02 j 11:08	0°♄			-132 Dec 12 j 06:44	0°♄	
	-137 Jun 13 j 08:19	0°♄			-131 Jan 20 j 08:47	0°♄	
	-137 Jul 28 j 17:17	0°♄			-131 Mar 01 j 18:27	0°♄	
asc. node	-137 Aug 14 j 17:20	10°♄23'08		evening set	-131 Mar 27 j 09:21	18°♄21'29	
	-137 Sep 19 j 09:47	0°♄		asc. node	-131 Apr 05 j 13:40	24°♄48'35	
retrograde	-137 Nov 24 j 05:21	19°♄47'56			-131 Apr 13 j 00:34	0°♄	
min. Earth dist.	-136 Jan 02 j 09:08	10°♄22'35	0.67157 AU				
opposition	-136 Jan 03 j 07:45	9°♄59'53	4°14'31	conjunction	-131 May 21 j 05:54	25°♄59'27	0°26'34
greatest brilliancy	-136 Jan 03 j 01:41	10°♄05'58	-1.2m	minimum elong	-131 May 21 j 04:44	25°♄57'30	0°26'33
direct	-136 Feb 12 j 14:47	0°♄19'15			-131 May 27 j 06:25	0°♄	
	-136 May 10 j 17:12	0°♄		max. Earth dist.	-131 Jun 11 j 17:50	10°♄12'38	2.61134 AU
	-136 Jul 01 j 18:28	0°♄		morning rise	-131 Jul 10 j 06:34	28°♄43'33	
	-136 Aug 16 j 22:01	0°♄			-131 Jul 12 j 06:10	0°♄	
desc. node	-136 Aug 31 j 20:59	10°♄18'18			-131 Aug 28 j 14:28	0°♄	
	-136 Sep 28 j 11:21	0°♄			-131 Oct 16 j 04:47	0°♄	
	-136 Nov 07 j 13:25	0°♄			-131 Dec 05 j 23:33	0°♄	
evening set	-136 Nov 16 j 00:48	6°♄30'57			-130 Feb 02 j 05:50	0°♄	
	-136 Dec 16 j 03:15	0°♄		retrograde	-130 Mar 29 j 18:30	14°♄21'01	
				desc. node	-130 Apr 23 j 18:20	10°♄32'58	
conjunction	-135 Jan 19 j 10:24	27°♄03'56	-1°-5'-2	opposition	-130 May 02 j 10:45	7°♄49'55	0°-29'-15
minimum elong	-135 Jan 19 j 09:46	27°♄02'41	1°05'03	greatest brilliancy	-130 May 02 j 16:41	7°♄45'01	-2.3m
	-135 Jan 23 j 03:42	0°♄		min. Earth dist.	-130 May 10 j 21:28	5°♄03'10	0.46418 AU
max. Earth dist.	-135 Feb 17 j 22:08	20°♄12'36	2.37667 AU		-130 Jun 03 j 23:54	30°♄	
	-135 Mar 02 j 13:07	0°♄		direct	-130 Jun 08 j 08:31	29°♄52'07	
morning rise	-135 Mar 30 j 04:48	21°♄04'30			-130 Jun 12 j 17:31	0°♄	
	-135 Apr 11 j 03:46	0°♄			-130 Aug 25 j 04:37	0°♄	
	-135 May 22 j 16:39	0°♄			-130 Oct 08 j 09:53	0°♄	
asc. node	-135 Jul 01 j 17:13	27°♄19'50			-130 Nov 18 j 10:54	0°♄	
	-135 Jul 05 j 18:10	0°♄			-130 Dec 29 j 05:45	0°♄	
	-135 Aug 22 j 03:37	0°♄			-129 Feb 09 j 00:51	0°♄	
	-135 Oct 14 j 18:25	0°♄		asc. node	-129 Feb 21 j 13:31	8°♄47'08	
retrograde	-135 Dec 28 j 04:56	23°♄10'53			-129 Mar 24 j 10:17	0°♄	
opposition	-134 Feb 05 j 12:08	13°♄57'43	4°34'48		-129 May 08 j 12:00	0°♄	
greatest brilliancy	-134 Feb 06 j 01:39	13°♄44'23	-1.3m	evening set	-129 May 13 j 22:42	3°♄33'39	
min. Earth dist.	-134 Feb 08 j 10:36	12°♄48'14	0.66285 AU		-129 Jun 23 j 20:57	0°♄	
direct	-134 Mar 18 j 19:42	3°♄56'28					
	-134 Jun 05 j 21:20	0°♄		conjunction	-129 Jul 01 j 14:59	4°♄57'38	1°01'13
	-134 Jul 19 j 20:38	25°♄54'16		minimum elong	-129 Jul 01 j 13:54	4°♄55'55	1°01'12
	-134 Jul 26 j 05:25	0°♄		max. Earth dist.	-129 Jul 06 j 20:05	8°♄17'32	2.66697 AU
	-134 Sep 07 j 23:40	0°♄			-129 Aug 09 j 21:49	0°♄	
	-134 Oct 18 j 09:58	0°♄		morning rise	-129 Aug 16 j 06:46	4°♄03'16	
	-134 Nov 26 j 01:40	0°♄			-129 Sep 26 j 00:16	0°♄	
	-133 Jan 03 j 03:29	0°♄			-129 Nov 11 j 21:37	0°♄	
evening set	-133 Jan 24 j 19:21	16°♄57'17			-129 Dec 28 j 19:00	0°♄	
	-133 Feb 10 j 16:10	0°♄			-128 Feb 14 j 12:57	0°♄	
	-133 Mar 22 j 11:55	0°♄		desc. node	-128 Mar 10 j 17:42	15°♄10'36	
					-128 Apr 06 j 04:13	0°♄	
conjunction	-133 Mar 30 j 12:07	5°♄52'39	0°-30'-20	retrograde	-128 Jun 13 j 14:32	22°♄21'10	
minimum elong	-133 Mar 30 j 14:09	5°♄56'22	0°30'20	opposition	-128 Jul 13 j 18:58	17°♄20'27	-6°-39'-48
	-133 May 03 j 04:58	0°♄		greatest brilliancy	-128 Jul 13 j 20:01	17°♄19'46	-2.9m
max. Earth dist.	-133 May 11 j 15:31	5°♄53'14	2.50423 AU	min. Earth dist.	-128 Jul 13 j 20:23	17°♄19'31	0.37473 AU
asc. node	-133 May 19 j 15:21	11°♄24'36		direct	-128 Aug 12 j 16:55	12°♄21'25	
morning rise	-133 May 28 j 17:28	17°♄37'38			-128 Oct 09 j 07:17	0°♄	
	-133 Jun 16 j 02:33	0°♄			-128 Nov 29 j 10:05	0°♄	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 28

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

asc. node	-127 Jan 08 j 12:36	25° K 48'33		behind sun end	-123 Oct 27 j 05:17	0° M 57'04	
	-127 Jan 14 j 23:17	0° Y		desc. node	-123 Oct 31 j 15:06	4° M 09'43	
	-127 Mar 02 j 04:40	0° B			-123 Dec 05 j 09:01	0° J	
	-127 Apr 18 j 00:48	0° II		morning rise	-123 Dec 20 j 08:07	11° J 23'13	
	-127 Jun 04 j 09:37	0° S			-122 Jan 13 j 11:16	0° S	
evening set	-127 Jun 21 j 16:58	10° S 56'39			-122 Feb 20 j 22:35	0° \approx	
	-127 Jul 21 j 17:30	0° Ω			-122 Mar 31 j 15:40	0° K	
max. Earth dist.	-127 Jul 29 j 03:56	4° Ω 44'35	2.66818 AU		-122 May 10 j 13:39	0° Y	
					-122 Jun 21 j 20:20	0° B	
conjunction	-127 Aug 06 j 18:31	10° Ω 15'03	1°09'11		-122 Aug 07 j 12:48	0° II	
minimum elong	-127 Aug 06 j 18:47	10° Ω 15'29	1°09'12	asc. node	-122 Aug 31 j 09:42	13° II 28'34	
	-127 Sep 06 j 08:31	0° M			-122 Oct 07 j 04:56	0° S	
morning rise	-127 Sep 20 j 09:33	9° M 10'44		retrograde	-122 Nov 10 j 18:59	6° S 39'13	
	-127 Oct 21 j 19:26	0° $\underline{\text{A}}$			-122 Dec 12 j 15:55	30° R II	
	-127 Dec 04 j 22:55	0° M		min. Earth dist.	-122 Dec 18 j 11:19	27° II 43'02	0.65713 AU
	-126 Jan 16 j 21:36	0° J		opposition	-122 Dec 20 j 22:13	26° II 43'52	3°45'02
desc. node	-126 Jan 26 j 17:12	6° J 57'22		greatest brilliancy	-122 Dec 20 j 10:17	26° II 55'51	-1.3m
	-126 Feb 27 j 23:17	0° S		direct	-121 Jan 29 j 11:01	17° II 18'45	
	-126 Apr 10 j 21:26	0° \approx			-121 Mar 22 j 20:43	0° S	
	-126 May 24 j 14:33	0° K			-121 May 21 j 20:11	0° Ω	
	-126 Jul 18 j 00:46	0° Y			-121 Jul 10 j 20:22	0° M	
retrograde	-126 Aug 21 j 01:54	7° Y 26'02			-121 Aug 25 j 10:11	0° $\underline{\text{A}}$	
min. Earth dist.	-126 Sep 17 j 19:31	2° Y 10'02	0.45149 AU	desc. node	-121 Sep 18 j 14:30	16° $\underline{\text{A}}$ 51'39	
	-126 Sep 24 j 03:30	30° R K			-121 Oct 06 j 20:36	0° M	
opposition	-126 Sep 25 j 21:42	29° K 23'31	-3°-17'-35	evening set	-121 Oct 24 j 16:56	13° M 10'02	
greatest brilliancy	-126 Sep 24 j 15:10	29° K 49'53	-2.4m		-121 Nov 15 j 23:33	0° J	
direct	-126 Oct 28 j 07:40	22° K 51'47		max. Earth dist.	-121 Nov 20 j 16:32	3° J 36'21	2.39016 AU
asc. node	-126 Nov 26 j 11:08	27° K 46'52					
	-126 Dec 03 j 03:33	0° Y		conjunction	-121 Dec 23 j 12:32	29° J 07'32	0°-54'-30
	-125 Feb 03 j 14:12	0° B		minimum elong	-121 Dec 23 j 09:57	29° J 02'29	0°54'31
	-125 Mar 27 j 10:00	0° II			-121 Dec 24 j 15:16	0° S	
	-125 May 16 j 01:13	0° S			-120 Jan 31 j 17:03	0° \approx	
	-125 Jul 03 j 08:29	0° Ω		morning rise	-120 Mar 01 j 02:57	23° \approx 02'10	
evening set	-125 Jul 29 j 04:53	16° Ω 26'59			-120 Mar 10 j 02:42	0° K	
	-125 Aug 19 j 02:30	0° M			-120 Apr 18 j 16:56	0° Y	
max. Earth dist.	-125 Aug 22 j 21:07	2° M 28'28	2.61599 AU		-120 May 30 j 06:28	0° B	
					-120 Jul 13 j 14:29	0° II	
conjunction	-125 Sep 13 j 12:58	16° M 50'16	0°50'01	asc. node	-120 Jul 18 j 07:57	3° II 03'57	
minimum elong	-125 Sep 13 j 14:15	16° M 52'24	0°50'00		-120 Aug 31 j 02:43	0° S	
	-125 Oct 02 j 23:55	0° $\underline{\text{A}}$			-120 Oct 29 j 15:22	0° Ω	
morning rise	-125 Oct 30 j 13:24	19° $\underline{\text{A}}$ 05'27		retrograde	-120 Dec 14 j 08:40	10° Ω 22'03	
	-125 Nov 14 j 23:23	0° M		opposition	-119 Jan 23 j 02:29	0° Ω 52'39	4°36'20
desc. node	-125 Dec 14 j 15:44	21° M 27'44		greatest brilliancy	-119 Jan 23 j 08:02	0° Ω 47'08	-1.2m
	-125 Dec 26 j 05:59	0° J		min. Earth dist.	-119 Jan 24 j 12:25	0° Ω 18'54	0.67424 AU
	-124 Feb 04 j 06:09	0° S			-119 Jan 25 j 07:27	30° R S	
	-124 Mar 14 j 14:54	0° \approx		direct	-119 Mar 05 j 04:38	20° S 56'12	
	-124 Apr 23 j 06:20	0° K			-119 Apr 16 j 23:44	0° Ω	
	-124 Jun 03 j 14:17	0° Y			-119 Jun 16 j 20:22	0° M	
	-124 Jul 19 j 14:01	0° B			-119 Aug 03 j 20:38	0° $\underline{\text{A}}$	
retrograde	-124 Oct 04 j 23:31	28° B 32'37		desc. node	-119 Aug 05 j 12:58	1° $\underline{\text{A}}$ 07'10	
asc. node	-124 Oct 13 j 10:22	28° B 01'36			-119 Sep 15 j 23:44	0° M	
min. Earth dist.	-124 Nov 07 j 02:39	21° B 10'14	0.57679 AU		-119 Oct 26 j 05:13	0° J	
opposition	-124 Nov 13 j 05:29	18° B 45'57	1°21'20		-119 Dec 03 j 19:11	0° S	
greatest brilliancy	-124 Nov 12 j 17:53	18° B 57'22	-1.7m	evening set	-119 Dec 27 j 16:32	18° S 51'13	
direct	-124 Dec 19 j 20:12	10° B 22'43			-118 Jan 10 j 19:26	0° \approx	
	-123 Feb 25 j 05:01	0° II			-118 Feb 18 j 05:36	0° K	
	-123 Apr 23 j 05:12	0° S					
	-123 Jun 12 j 23:42	0° Ω		conjunction	-118 Mar 04 j 20:59	11° K 12'32	0°-51'-45
	-123 Jul 30 j 13:38	0° M		minimum elong	-118 Mar 04 j 23:53	11° K 18'03	0°51'44
evening set	-123 Sep 06 j 02:27	24° M 58'11			-118 Mar 29 j 21:58	0° Y	
	-123 Sep 13 j 10:50	0° $\underline{\text{A}}$		max. Earth dist.	-118 Apr 23 j 09:22	17° Y 50'54	2.45128 AU
max. Earth dist.	-123 Sep 21 j 23:07	5° $\underline{\text{A}}$ 53'11	2.51492 AU	morning rise	-118 May 08 j 02:41	28° Y 19'39	
	-123 Oct 25 j 21:49	0° M			-118 May 10 j 11:40	0° B	
				asc. node	-118 Jun 05 j 07:18	17° B 51'35	
conjunction	-123 Oct 26 j 07:27	0° M 17'27	0°03'26		-118 Jun 23 j 08:17	0° II	
minimum elong	-123 Oct 26 j 07:35	0° M 17'42	0°03'25		-118 Aug 08 j 18:30	0° S	
behind sun begin	-123 Oct 25 j 09:54	29° $\underline{\text{A}}$ 38'23			-118 Sep 27 j 14:40	0° Ω	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 29

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-118 Nov 24 j 18:12	0°♈				-112 Jan 25 j 18:43	0°♎	
retrograde	-117 Jan 20 j 13:21	14°♈40'02		asc. node		-112 Jan 26 j 04:02	0°♎15'50	
opposition	-117 Feb 27 j 19:32	5°♈59'24	4°04'10			-112 Mar 10 j 12:18	0°♏	
greatest brilliancy	-117 Feb 28 j 19:28	5°♈36'17	-1.4m			-112 Apr 25 j 11:25	0°♐	
min. Earth dist.	-117 Mar 05 j 01:17	3°♈58'09	0.62542 AU	evening set		-112 Jun 06 j 18:23	27°♐04'40	
	-117 Mar 16 j 08:01	30°♈				-112 Jun 11 j 08:35	0°♑	
direct	-117 Apr 09 j 23:23	26°♈02'18		max. Earth dist.		-112 Jul 20 j 04:55	24°♑42'24	2.67426 AU
	-117 May 06 j 08:35	0°♈						
desc. node	-117 Jun 23 j 11:41	20°♈45'50		conjunction		-112 Jul 23 j 11:58	26°♑48'16	1°09'16
	-117 Jul 09 j 15:52	0°♈		minimum elong		-112 Jul 23 j 11:40	26°♑47'49	1°09'16
	-117 Aug 24 j 18:50	0°♈				-112 Jul 28 j 12:15	0°♒	
	-117 Oct 05 j 00:35	0°♈		morning rise		-112 Sep 06 j 04:04	25°♒25'33	
	-117 Nov 13 j 01:30	0°♈				-112 Sep 13 j 05:58	0°♈	
	-117 Dec 21 j 09:46	0°♈				-112 Oct 29 j 03:02	0°♈	
	-116 Jan 29 j 04:44	0°♈				-112 Dec 13 j 01:19	0°♈	
evening set	-116 Mar 05 j 00:33	26°♈51'33				-111 Jan 26 j 04:43	0°♈	
	-116 Mar 09 j 07:16	0°♈		desc. node		-111 Feb 12 j 09:00	11°♈45'40	
	-116 Apr 20 j 06:33	0°♈				-111 Mar 11 j 00:38	0°♈	
asc. node	-116 Apr 22 j 06:43	1°♈23'55				-111 Apr 24 j 21:33	0°♈	
						-111 Jun 16 j 06:51	0°♈	
conjunction	-116 May 02 j 12:34	8°♈29'15	0°06'15	retrograde		-111 Jul 28 j 21:51	11°♈01'17	
minimum elong	-116 May 02 j 12:13	8°♈28'38	0°06'15	min. Earth dist.		-111 Aug 24 j 11:08	6°♈27'11	0.40567 AU
behind sun begin	-116 May 01 j 14:42	7°♈51'37		greatest brilliancy		-111 Aug 29 j 17:56	4°♈50'42	-2.7m
behind sun end	-116 May 03 j 09:44	9°♈05'37		opposition		-111 Aug 31 j 07:28	4°♈21'56	-5°-30'-42
max. Earth dist.	-116 May 31 j 17:13	28°♈16'24	2.57485 AU			-111 Sep 17 j 06:15	30°♈	
	-116 Jun 03 j 07:22	0°♈		direct		-111 Sep 30 j 20:28	28°♈46'16	
morning rise	-116 Jun 24 j 11:45	13°♈58'29				-111 Oct 14 j 19:15	0°♈	
	-116 Jul 19 j 06:18	0°♈		asc. node		-111 Dec 13 j 03:21	23°♈16'06	
	-116 Sep 04 j 22:41	0°♈				-111 Dec 25 j 13:35	0°♈	
	-116 Oct 24 j 16:26	0°♈				-110 Feb 14 j 20:35	0°♈	
	-116 Dec 18 j 02:50	0°♈				-110 Apr 04 j 23:00	0°♈	
retrograde	-115 Mar 06 j 19:13	25°♈04'16				-110 May 23 j 11:03	0°♈	
opposition	-115 Apr 11 j 04:06	17°♈46'26	1°27'40			-110 Jul 10 j 06:54	0°♈	
greatest brilliancy	-115 Apr 11 j 21:44	17°♈30'48	-2.0m	evening set		-110 Jul 14 j 14:32	2°♈44'26	
min. Earth dist.	-115 Apr 19 j 11:06	14°♈50'47	0.51650 AU	max. Earth dist.		-110 Aug 12 j 19:44	21°♈28'13	2.64278 AU
desc. node	-115 May 10 j 10:54	9°♈29'13				-110 Aug 25 j 22:32	0°♈	
direct	-115 May 20 j 01:25	8°♈51'07						
	-115 Jul 23 j 02:50	0°♈		conjunction		-110 Aug 29 j 11:05	2°♈18'21	1°00'45
	-115 Sep 08 j 05:34	0°♈		minimum elong		-110 Aug 29 j 12:06	2°♈20'01	1°00'45
	-115 Oct 19 j 11:13	0°♈				-110 Oct 09 j 23:56	0°♈	
	-115 Nov 28 j 03:18	0°♈		morning rise		-110 Oct 14 j 01:00	2°♈45'00	
	-114 Jan 07 j 00:04	0°♈				-110 Nov 22 j 08:20	0°♈	
	-114 Feb 17 j 02:05	0°♈		desc. node		-110 Dec 31 j 09:01	27°♈59'22	
asc. node	-114 Mar 10 j 05:16	14°♈58'01				-109 Jan 03 j 03:12	0°♈	
	-114 Mar 31 j 22:00	0°♈				-109 Feb 12 j 17:24	0°♈	
evening set	-114 Apr 26 j 17:38	17°♈28'56				-109 Mar 24 j 17:24	0°♈	
	-114 May 15 j 13:55	0°♈				-109 May 04 j 04:02	0°♈	
						-109 Jun 16 j 01:40	0°♈	
conjunction	-114 Jun 16 j 07:54	20°♈43'14	0°50'55			-109 Aug 07 j 08:59	0°♈	
minimum elong	-114 Jun 16 j 06:32	20°♈41'00	0°50'54	retrograde		-109 Sep 19 j 18:19	11°♈07'00	
max. Earth dist.	-114 Jun 27 j 09:03	27°♈50'46	2.65158 AU	min. Earth dist.		-109 Oct 20 j 19:36	4°♈30'51	0.53083 AU
	-114 Jun 30 j 17:29	0°♈		opposition		-109 Oct 28 j 02:53	1°♈43'46	0°-8'-31
morning rise	-114 Aug 02 j 06:00	20°♈46'07		greatest brilliancy		-108 Mar 05 j 13:30	27°♈35'54	-3.3m
	-114 Aug 16 j 19:08	0°♈		asc. node		-109 Oct 31 j 01:31	0°♈37'16	
	-114 Oct 03 j 07:18	0°♈				-109 Nov 01 j 18:12	30°♈	
	-114 Nov 20 j 05:22	0°♈		direct		-109 Dec 02 j 05:08	23°♈56'56	
	-113 Jan 08 j 08:55	0°♈				-108 Jan 04 j 15:24	0°♈	
	-113 Mar 02 j 22:38	0°♈				-108 Mar 10 j 01:05	0°♈	
desc. node	-113 Mar 28 j 09:31	11°♈47'53				-108 May 01 j 20:57	0°♈	
retrograde	-113 May 13 j 01:50	22°♈31'43				-108 Jun 20 j 09:50	0°♈	
opposition	-113 Jun 12 j 22:59	17°♈16'58	-4°-38'-24			-108 Aug 06 j 13:57	0°♈	
greatest brilliancy	-113 Jun 14 j 00:29	16°♈58'57	-2.7m	evening set		-108 Aug 20 j 23:10	9°♈27'21	
min. Earth dist.	-113 Jun 18 j 00:19	15°♈51'36	0.39380 AU	max. Earth dist.		-108 Sep 08 j 14:59	21°♈57'05	2.55994 AU
direct	-113 Jul 15 j 06:14	11°♈23'40				-108 Sep 20 j 10:19	0°♈	
	-113 Sep 11 j 08:12	0°♈						
	-113 Oct 29 j 22:29	0°♈		conjunction		-108 Oct 08 j 01:56	12°♈14'28	0°24'33
	-113 Dec 12 j 23:48	0°♈		minimum elong		-108 Oct 08 j 02:56	12°♈16'13	0°24'32

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 30

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-108 Nov 02 j 01:29	0°♄		greatest brilliancy	-102 Feb 14 j 04:10	21°♄49'10	-1.3m
desc. node	-108 Nov 17 j 07:42	11°♄05'36		min. Earth dist.	-102 Feb 17 j 04:52	20°♄38'00	0.65225 AU
morning rise	-108 Nov 28 j 00:31	18°♄58'33		direct	-102 Mar 26 j 18:48	12°♄04'58	
	-108 Dec 12 j 19:14	0°♂			-102 May 28 j 05:57	0°♄	
	-107 Jan 21 j 04:38	0°♂		desc. node	-102 Jul 10 j 04:00	23°♄44'04	
	-107 Feb 28 j 22:25	0°♂			-102 Jul 20 j 05:16	0°♄	
	-107 Apr 08 j 21:08	0°♂			-102 Sep 02 j 15:59	0°♄	
	-107 May 19 j 02:24	0°♂			-102 Oct 13 j 08:24	0°♂	
	-107 Jul 01 j 02:10	0°♂			-102 Nov 21 j 02:59	0°♂	
	-107 Aug 19 j 09:44	0°♄			-102 Dec 29 j 06:31	0°♂	
asc. node	-107 Sep 17 j 00:37	13°♄37'03			-101 Feb 05 j 20:26	0°♂	
retrograde	-107 Oct 28 j 01:30	22°♄54'40		evening set	-101 Feb 08 j 23:49	2°♂24'22	
min. Earth dist.	-107 Dec 03 j 02:28	14°♄31'30	0.63281 AU		-101 Mar 17 j 17:26	0°♂	
greatest brilliancy	-107 Dec 06 j 09:45	13°♄12'06	-1.4m				
opposition	-107 Dec 07 j 01:09	12°♄56'40	3°02'22	conjunction	-101 Apr 12 j 13:58	18°♂45'12	0°-16'-47
direct	-106 Jan 14 j 14:58	3°♄51'20		minimum elong	-101 Apr 12 j 15:04	18°♂47'10	0°16'48
	-106 Apr 06 j 02:34	0°♂			-101 Apr 28 j 11:30	0°♂	
	-106 May 30 j 16:08	0°♄		asc. node	-101 May 09 j 21:49	7°♂57'26	
	-106 Jul 18 j 10:41	0°♄		max. Earth dist.	-101 May 20 j 03:15	14°♂59'12	2.53118 AU
	-106 Sep 01 j 15:57	0°♄		morning rise	-101 Jun 08 j 07:58	27°♂58'12	
evening set	-106 Oct 04 j 05:15	22°♄52'15			-101 Jun 11 j 08:55	0°♄	
desc. node	-106 Oct 05 j 06:05	23°♄36'52			-101 Jul 27 j 09:30	0°♂	
	-106 Oct 14 j 01:49	0°♄			-101 Sep 13 j 14:56	0°♄	
max. Earth dist.	-106 Oct 20 j 05:40	4°♄30'11	2.43759 AU		-101 Nov 04 j 04:08	0°♄	
	-106 Nov 23 j 07:24	0°♂			-100 Jan 06 j 06:25	0°♄	
				retrograde	-100 Feb 16 j 03:27	8°♄18'45	
conjunction	-106 Nov 28 j 11:32	3°♂56'56	0°-33'-55	opposition	-100 Mar 23 j 20:12	0°♄22'55	2°48'37
minimum elong	-106 Nov 28 j 09:32	3°♂53'06	0°33'54		-100 Mar 24 j 20:54	30°♄	
	-105 Jan 01 j 02:39	0°♂		greatest brilliancy	-100 Mar 24 j 22:32	29°♄58'30	-1.7m
morning rise	-105 Jan 31 j 02:26	23°♂32'50		min. Earth dist.	-100 Mar 31 j 04:03	27°♄40'23	0.56508 AU
	-105 Feb 08 j 07:29	0°♂		direct	-100 May 03 j 00:12	20°♄51'53	
	-105 Mar 18 j 18:56	0°♂		desc. node	-100 May 27 j 02:30	24°♄22'28	
	-105 Apr 27 j 10:21	0°♂			-100 Jun 12 j 11:20	0°♄	
	-105 Jun 08 j 02:56	0°♂			-100 Aug 06 j 16:59	0°♄	
	-105 Jul 22 j 22:46	0°♄			-100 Sep 19 j 02:06	0°♂	
asc. node	-105 Aug 05 j 00:43	8°♄13'32			-100 Oct 29 j 01:11	0°♂	
	-105 Sep 11 j 10:46	0°♂			-100 Dec 06 j 23:48	0°♂	
retrograde	-105 Dec 01 j 21:17	27°♂38'25			-99 Jan 15 j 06:56	0°♂	
opposition	-104 Jan 10 j 22:03	17°♂56'01	4°26'01		-99 Feb 24 j 20:55	0°♂	
greatest brilliancy	-104 Jan 10 j 19:51	17°♂58'13	-1.2m	asc. node	-99 Mar 26 j 21:29	21°♂23'05	
min. Earth dist.	-104 Jan 10 j 19:22	17°♂58'42	0.67529 AU	evening set	-99 Apr 07 j 22:27	29°♂45'59	
direct	-104 Feb 20 j 13:42	8°♂08'39			-99 Apr 08 j 06:33	0°♂	
	-104 May 03 j 00:19	0°♄			-99 May 22 j 14:39	0°♄	
	-104 Jun 26 j 03:50	0°♄					
	-104 Aug 11 j 21:16	0°♄		conjunction	-99 May 31 j 01:54	5°♄35'45	0°36'35
desc. node	-104 Aug 22 j 04:56	7°♄01'52		minimum elong	-99 May 31 j 00:31	5°♄33'29	0°36'35
	-104 Sep 23 j 15:30	0°♄		max. Earth dist.	-99 Jun 17 j 17:13	17°♄08'22	2.62791 AU
	-104 Nov 02 j 18:47	0°♂			-99 Jul 07 j 14:41	0°♂	
evening set	-104 Nov 30 j 10:02	21°♂24'58		morning rise	-99 Jul 18 j 19:42	7°♄10'57	
	-104 Dec 11 j 08:30	0°♂			-99 Aug 23 j 19:31	0°♄	
	-103 Jan 18 j 08:31	0°♂			-99 Oct 10 j 22:15	0°♄	
					-99 Nov 29 j 09:42	0°♄	
conjunction	-103 Feb 04 j 17:18	13°♂39'18	-1°-4'-17		-98 Jan 21 j 18:21	0°♄	
minimum elong	-103 Feb 04 j 18:28	13°♂41'36	1°04'18	retrograde	-98 Apr 13 j 14:46	27°♄11'29	
	-103 Feb 25 j 17:32	0°♂		desc. node	-98 Apr 14 j 02:11	27°♄11'24	
max. Earth dist.	-103 Mar 24 j 22:25	20°♂44'30	2.39907 AU	opposition	-98 May 16 j 03:48	21°♄09'24	-1°-53'-26
	-103 Apr 06 j 07:57	0°♂		greatest brilliancy	-98 May 16 j 23:20	20°♄54'04	-2.5m
morning rise	-103 Apr 14 j 06:44	5°♂52'01		min. Earth dist.	-98 May 24 j 00:45	18°♄41'27	0.43568 AU
	-103 May 17 j 20:03	0°♂		direct	-98 Jun 20 j 14:51	13°♄53'20	
asc. node	-103 Jun 21 j 23:25	24°♂08'58			-98 Aug 12 j 17:51	0°♂	
	-103 Jun 30 j 18:04	0°♄			-98 Sep 30 j 07:10	0°♂	
	-103 Aug 16 j 15:47	0°♂			-98 Nov 11 j 18:09	0°♂	
	-103 Oct 07 j 09:13	0°♄			-98 Dec 23 j 07:45	0°♂	
	-103 Dec 22 j 08:43	0°♄			-97 Feb 03 j 15:27	0°♂	
retrograde	-102 Jan 05 j 10:58	1°♄09'08		asc. node	-97 Feb 11 j 19:45	5°♂41'20	
	-102 Jan 18 j 19:43	30°♄			-97 Mar 19 j 09:54	0°♂	
opposition	-102 Feb 13 j 10:34	22°♄06'25	4°27'38		-97 May 03 j 17:40	0°♄	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 31

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

evening set	-97 May 23 j 05:41	12° Π 39'00			-92 Jul 11 j 16:49	0° \mathcal{B}	
	-97 Jun 19 j 05:59	0° \mathfrak{S}			-92 Sep 06 j 08:17	0° Π	
				asc. node	-92 Oct 03 j 17:27	7° Π 25'15	
conjunction	-97 Jul 10 j 01:39	13° \mathfrak{S} 17'19	1°05'20	retrograde	-92 Oct 13 j 15:24	8° Π 05'01	
minimum elong	-97 Jul 10 j 00:50	13° \mathfrak{S} 16'02	1°05'19	min. Earth dist.	-92 Nov 16 j 20:37	0° Π 19'46	0.59914 AU
max. Earth dist.	-97 Jul 12 j 03:50	14° \mathfrak{S} 37'19	2.67197 AU		-92 Nov 17 j 16:41	30° \mathcal{R} \mathcal{B}	
	-97 Aug 05 j 07:16	0° \mathcal{Q}		opposition	-92 Nov 22 j 05:50	28° \mathcal{B} 11'39	2°03'43
morning rise	-97 Aug 24 j 05:36	12° \mathcal{Q} 04'21		greatest brilliancy	-92 Nov 21 j 15:00	28° \mathcal{B} 26'22	-1.6m
	-97 Sep 21 j 05:52	0° \mathfrak{M}		direct	-92 Dec 29 j 15:09	19° \mathcal{B} 31'41	
	-97 Nov 06 j 17:23	0° \mathfrak{A}			-91 Feb 14 j 00:25	0° Π	
	-97 Dec 22 j 18:45	0° \mathfrak{M}			-91 Apr 16 j 22:34	0° \mathfrak{S}	
	-96 Feb 06 j 20:28	0° \mathcal{A}			-91 Jun 07 j 19:04	0° \mathcal{Q}	
desc. node	-96 Mar 01 j 01:53	14° \mathcal{A} 54'40			-91 Jul 25 j 18:24	0° \mathfrak{M}	
	-96 Mar 25 j 05:11	0° \mathfrak{Z}			-91 Sep 08 j 18:50	0° \mathfrak{A}	
	-96 May 19 j 07:16	0° \approx		evening set	-91 Sep 15 j 20:20	4° \mathfrak{A} 52'30	
retrograde	-96 Jul 01 j 01:44	10° \approx 32'19		max. Earth dist.	-91 Sep 30 j 19:18	15° \mathfrak{A} 20'59	2.48828 AU
min. Earth dist.	-96 Jul 29 j 02:42	5° \approx 58'57	0.37741 AU	desc. node	-91 Oct 21 j 22:30	0° \mathfrak{M} 30'00	
greatest brilliancy	-96 Jul 31 j 06:54	5° \approx 23'24	-2.8m		-91 Oct 21 j 05:58	0° \mathfrak{M}	
opposition	-96 Aug 01 j 01:08	5° \approx 10'58	-6°-51'-18				
direct	-96 Aug 30 j 15:56	0° \approx 13'39		conjunction	-91 Nov 06 j 13:18	11° \mathfrak{M} 57'03	0°-10'-1
	-96 Nov 19 j 11:22	0° \mathcal{H}		minimum elong	-91 Nov 06 j 12:44	11° \mathfrak{M} 56'01	0°10'01
asc. node	-96 Dec 29 j 18:06	24° \mathcal{H} 13'50		behind sun begin	-91 Nov 05 j 18:20	11° \mathfrak{M} 22'00	
	-95 Jan 07 j 23:44	0° \mathcal{Y}		behind sun end	-91 Nov 07 j 07:08	12° \mathfrak{M} 30'03	
	-95 Feb 24 j 10:50	0° \mathcal{B}			-91 Nov 30 j 15:30	0° \mathcal{A}	
	-95 Apr 12 j 22:10	0° Π		morning rise	-90 Jan 03 j 09:01	25° \mathcal{A} 54'42	
	-95 May 30 j 15:11	0° \mathfrak{S}			-90 Jan 08 j 15:12	0° \mathfrak{Z}	
evening set	-95 Jun 30 j 02:48	19° \mathfrak{S} 12'58			-90 Feb 15 j 23:51	0° \approx	
	-95 Jul 17 j 02:54	0° \mathcal{Q}			-90 Mar 26 j 14:05	0° \mathcal{H}	
max. Earth dist.	-95 Aug 03 j 11:57	11° \mathcal{Q} 05'49	2.66142 AU		-90 May 05 j 08:13	0° \mathcal{Y}	
					-90 Jun 16 j 07:19	0° \mathcal{B}	
conjunction	-95 Aug 14 j 23:23	18° \mathcal{Q} 28'33	1°07'17		-90 Aug 01 j 00:47	0° Π	
minimum elong	-95 Aug 14 j 23:57	18° \mathcal{Q} 29'29	1°07'16	asc. node	-90 Aug 21 j 15:57	12° Π 17'27	
	-95 Sep 01 j 17:55	0° \mathfrak{M}			-90 Sep 24 j 17:35	0° \mathfrak{S}	
morning rise	-95 Sep 28 j 18:39	17° \mathfrak{M} 46'56		retrograde	-90 Nov 18 j 12:28	14° \mathfrak{S} 43'19	
	-95 Oct 17 j 01:16	0° \mathfrak{A}		min. Earth dist.	-90 Dec 27 j 01:16	5° \mathfrak{S} 30'41	0.66636 AU
	-95 Nov 29 j 21:25	0° \mathfrak{M}		opposition	-90 Dec 28 j 16:22	4° \mathfrak{S} 51'27	4°03'50
	-94 Jan 11 j 09:01	0° \mathcal{A}		greatest brilliancy	-90 Dec 28 j 07:24	5° \mathfrak{S} 00'26	-1.3m
desc. node	-94 Jan 17 j 00:42	4° \mathcal{A} 03'22			-89 Jan 10 j 13:14	30° \mathcal{R} Π	
	-94 Feb 21 j 19:46	0° \mathfrak{Z}		direct	-89 Feb 06 j 16:30	25° Π 17'16	
	-94 Apr 03 j 20:49	0° \approx			-89 Mar 08 j 13:50	0° \mathfrak{S}	
	-94 May 15 j 21:11	0° \mathcal{H}			-89 May 15 j 09:32	0° \mathcal{Q}	
	-94 Jul 01 j 20:50	0° \mathcal{Y}			-89 Jul 05 j 13:32	0° \mathfrak{M}	
retrograde	-94 Sep 01 j 13:03	20° \mathcal{Y} 51'29			-89 Aug 20 j 12:26	0° \mathfrak{A}	
min. Earth dist.	-94 Sep 30 j 10:13	15° \mathcal{Y} 06'36	0.47966 AU	desc. node	-89 Sep 08 j 21:01	13° \mathfrak{A} 23'33	
opposition	-94 Oct 08 j 10:52	12° \mathcal{Y} 13'03	-2°-3'00		-89 Oct 02 j 01:55	0° \mathfrak{M}	
greatest brilliancy	-94 Oct 07 j 14:20	12° \mathcal{Y} 31'37	-2.2m	evening set	-89 Nov 06 j 12:51	26° \mathfrak{M} 25'23	
direct	-94 Nov 10 j 19:43	5° \mathcal{Y} 12'12			-89 Nov 11 j 05:23	0° \mathcal{A}	
asc. node	-94 Nov 16 j 18:01	5° \mathcal{Y} 25'54			-89 Dec 19 j 20:33	0° \mathfrak{Z}	
	-93 Jan 25 j 21:18	0° \mathcal{B}		max. Earth dist.	-89 Dec 28 j 06:37	6° \mathfrak{Z} 37'24	2.37354 AU
	-93 Mar 21 j 08:33	0° Π					
	-93 May 10 j 21:27	0° \mathfrak{S}		conjunction	-88 Jan 07 j 23:31	15° \mathfrak{Z} 04'00	-1°-2'-10
	-93 Jun 28 j 14:10	0° \mathcal{Q}		minimum elong	-88 Jan 07 j 21:44	15° \mathfrak{Z} 00'28	1°02'11
evening set	-93 Aug 06 j 16:56	24° \mathcal{Q} 56'05			-88 Jan 26 j 21:41	0° \approx	
	-93 Aug 14 j 11:44	0° \mathfrak{M}			-88 Mar 05 j 06:39	0° \mathcal{H}	
max. Earth dist.	-93 Aug 29 j 00:20	9° \mathfrak{M} 33'27	2.59808 AU	morning rise	-88 Mar 17 j 19:05	9° \mathcal{H} 37'18	
					-88 Apr 13 j 19:58	0° \mathcal{Y}	
conjunction	-93 Sep 22 j 12:06	25° \mathfrak{M} 59'40	0°41'52		-88 May 25 j 07:37	0° \mathcal{B}	
minimum elong	-93 Sep 22 j 13:24	26° \mathfrak{M} 01'51	0°41'52	asc. node	-88 Jul 08 j 15:29	0° Π 09'38	
	-93 Sep 28 j 09:03	0° \mathfrak{A}			-88 Jul 08 j 09:37	0° Π	
morning rise	-93 Nov 09 j 15:22	29° \mathfrak{A} 34'21			-88 Aug 25 j 02:40	0° \mathfrak{S}	
	-93 Nov 10 j 05:42	0° \mathfrak{M}			-88 Oct 19 j 09:17	0° \mathcal{Q}	
desc. node	-93 Dec 04 j 23:40	17° \mathfrak{M} 56'13		retrograde	-88 Dec 22 j 05:18	18° \mathcal{Q} 09'02	
	-93 Dec 21 j 07:35	0° \mathcal{A}		opposition	-87 Jan 30 j 18:12	8° \mathcal{Q} 48'01	4°36'46
	-92 Jan 30 j 01:56	0° \mathfrak{Z}		greatest brilliancy	-87 Jan 31 j 04:10	8° \mathcal{Q} 38'10	-1.2m
	-92 Mar 09 j 04:32	0° \approx		min. Earth dist.	-87 Feb 02 j 00:17	7° \mathcal{Q} 54'29	0.66922 AU
	-92 Apr 17 j 12:19	0° \mathcal{H}			-87 Feb 27 j 09:17	30° \mathcal{R} \mathfrak{S}	
	-92 May 28 j 07:02	0° \mathcal{Y}		direct	-87 Mar 13 j 00:37	28° \mathfrak{S} 48'20	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 32

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-87 Mar 27 j 09:02	0°♈		conjunction	-82 Jun 25 j 04:46	29°♈25'07	0°57'23
	-87 Jun 10 j 01:28	0°♍		minimum elong	-82 Jun 25 j 03:32	29°♈23'09	0°57'23
desc. node	-87 Jul 26 j 20:25	28°♍21'23			-82 Jun 26 j 02:30	0°♋	
	-87 Jul 29 j 08:45	0°♌		max. Earth dist.	-82 Jul 02 j 22:20	4°♋22'36	2.66115 AU
	-87 Sep 10 j 21:30	0°♍		morning rise	-82 Aug 10 j 08:23	28°♋51'57	
	-87 Oct 21 j 06:29	0°♎			-82 Aug 12 j 03:14	0°♈	
	-87 Nov 28 j 21:43	0°♏			-82 Sep 28 j 09:31	0°♍	
greatest brilliancy	-87 Dec 22 j 10:05	18°♏32'31	1.2m		-82 Nov 14 j 16:51	0°♌	
	-86 Jan 05 j 22:45	0°♐			-81 Jan 01 j 10:33	0°♍	
evening set	-86 Jan 12 j 15:22	5°♐15'53			-81 Feb 20 j 01:12	0°♎	
	-86 Feb 13 j 09:41	0°♑		desc. node	-81 Mar 18 j 17:16	14°♎51'31	
					-81 Apr 19 j 19:58	0°♏	
conjunction	-86 Mar 19 j 18:21	26°♑01'40	0°-40'-7	retrograde	-81 May 31 j 07:16	9°♏16'15	
minimum elong	-86 Mar 19 j 20:59	26°♑06'34	0°40'06	opposition	-81 Jun 30 j 12:32	4°♏16'30	-5°-59'-26
	-86 Mar 25 j 02:54	0°♒		greatest brilliancy	-81 Jul 01 j 03:52	4°♏06'15	-2.8m
max. Earth dist.	-86 May 04 j 13:46	29°♒11'39	2.48118 AU	min. Earth dist.	-81 Jul 03 j 00:49	3°♏36'15	0.37962 AU
	-86 May 05 j 17:16	0°♓			-81 Jul 18 j 23:32	30°♒♎	
morning rise	-86 May 20 j 04:07	10°♓04'21		direct	-81 Jul 31 j 05:28	29°♎00'30	
asc. node	-86 May 26 j 14:04	14°♓29'07			-81 Aug 12 j 11:58	0°♏	
	-86 Jun 18 j 12:49	0°♈			-81 Oct 19 j 17:24	0°♐	
	-86 Aug 03 j 17:42	0°♋			-81 Dec 05 j 15:35	0°♑	
	-86 Sep 21 j 19:19	0°♈		asc. node	-80 Jan 16 j 11:03	27°♑49'51	
	-86 Nov 15 j 12:54	0°♍			-80 Jan 19 j 17:14	0°♒	
retrograde	-85 Jan 29 j 16:40	23°♍11'47			-80 Mar 05 j 04:06	0°♓	
opposition	-85 Mar 08 j 11:31	14°♍45'11	3°42'24		-80 Apr 20 j 13:16	0°♈	
greatest brilliancy	-85 Mar 09 j 13:38	14°♍20'15	-1.5m		-80 Jun 06 j 16:09	0°♋	
min. Earth dist.	-85 Mar 14 j 12:13	12°♍27'24	0.60660 AU	evening set	-80 Jun 15 j 09:33	5°♋31'58	
direct	-85 Apr 18 j 10:00	4°♍54'02			-80 Jul 23 j 22:04	0°♈	
desc. node	-85 Jun 13 j 20:00	20°♍41'54		max. Earth dist.	-80 Jul 25 j 12:39	1°♈01'29	2.67197 AU
	-85 Jul 01 j 18:04	0°♌					
	-85 Aug 18 j 17:26	0°♍		conjunction	-80 Jul 31 j 16:51	4°♌57'57	1°09'42
	-85 Sep 29 j 12:53	0°♎		minimum elong	-80 Jul 31 j 16:54	4°♌58'01	1°09'42
	-85 Nov 07 j 19:43	0°♏			-80 Sep 08 j 14:30	0°♍	
	-85 Dec 16 j 07:41	0°♐		morning rise	-80 Sep 14 j 06:54	3°♍41'37	
	-84 Jan 24 j 05:34	0°♑			-80 Oct 24 j 06:24	0°♌	
	-84 Mar 04 j 10:42	0°♒			-80 Dec 07 j 18:13	0°♍	
evening set	-84 Mar 18 j 01:22	9°♒51'42			-79 Jan 20 j 04:58	0°♎	
asc. node	-84 Apr 12 j 12:08	27°♒53'53		desc. node	-79 Feb 02 j 17:03	9°♎26'34	
	-84 Apr 15 j 12:28	0°♓			-79 Mar 03 j 22:48	0°♏	
					-79 Apr 15 j 20:49	0°♐	
conjunction	-84 May 13 j 10:48	19°♓09'27	0°18'25		-79 May 31 j 17:19	0°♑	
minimum elong	-84 May 13 j 09:53	19°♓07'55	0°18'24	retrograde	-79 Aug 11 j 13:01	26°♑55'04	
	-84 May 29 j 14:41	0°♈		min. Earth dist.	-79 Sep 07 j 13:24	22°♑00'12	0.42959 AU
max. Earth dist.	-84 Jun 07 j 08:58	5°♈48'32	2.59612 AU	greatest brilliancy	-79 Sep 13 j 20:24	19°♑57'01	-2.5m
morning rise	-84 Jul 03 j 16:10	22°♈59'47		opposition	-79 Sep 15 j 08:08	19°♑27'34	-4°-16'-31
	-84 Jul 14 j 13:01	0°♋		direct	-79 Oct 16 j 22:14	13°♑21'03	
	-84 Aug 30 j 23:41	0°♈		asc. node	-79 Dec 03 j 09:34	25°♑09'50	
	-84 Oct 18 j 23:43	0°♍			-79 Dec 14 j 03:59	0°♒	
	-84 Dec 10 j 00:01	0°♌			-78 Feb 07 j 22:46	0°♓	
	-83 Feb 13 j 06:27	0°♍			-78 Mar 30 j 09:49	0°♈	
retrograde	-83 Mar 19 j 07:40	6°♍03'44			-78 May 18 j 12:14	0°♋	
	-83 Apr 20 j 08:48	30°♒♌			-78 Jul 05 j 14:36	0°♈	
opposition	-83 Apr 22 j 19:00	29°♌10'45	0°25'31	evening set	-78 Jul 22 j 23:09	11°♌01'36	
greatest brilliancy	-83 Apr 23 j 00:49	29°♌05'47	-2.2m	max. Earth dist.	-78 Aug 18 j 13:44	28°♌11'44	2.62887 AU
desc. node	-83 Apr 30 j 18:16	26°♌27'32			-78 Aug 21 j 08:05	0°♍	
min. Earth dist.	-83 May 01 j 07:46	26°♌16'18	0.48778 AU				
direct	-83 May 30 j 17:15	20°♌44'08		conjunction	-78 Sep 07 j 00:27	10°♍58'42	0°55'01
	-83 Jul 09 j 03:59	0°♍		minimum elong	-78 Sep 07 j 01:39	11°♍00'41	0°55'00
	-83 Aug 31 j 07:42	0°♎			-78 Oct 05 j 08:10	0°♌	
	-83 Oct 12 j 22:30	0°♏		morning rise	-78 Oct 23 j 07:15	12°♌19'50	
	-83 Nov 22 j 06:21	0°♐			-78 Nov 17 j 12:20	0°♍	
	-82 Jan 01 j 13:28	0°♑		desc. node	-78 Dec 21 j 15:39	24°♍35'02	
	-82 Feb 11 j 23:02	0°♒			-78 Dec 29 j 01:02	0°♓	
asc. node	-82 Feb 28 j 11:57	11°♒39'58			-77 Feb 07 j 07:29	0°♏	
	-82 Mar 27 j 00:51	0°♓			-77 Mar 18 j 22:34	0°♐	
evening set	-82 May 06 j 17:47	27°♓17'03			-77 Apr 27 j 20:44	0°♑	
	-82 May 10 j 20:47	0°♈			-77 Jun 08 j 16:06	0°♒	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 33

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-77 Jul 26 j 06:42	0°♄				-72 Aug 06 j 17:03	0°♅		
retrograde	-77 Sep 29 j 04:46	21°♄45'37		desc. node		-72 Aug 12 j 12:53	3°♅55'09		
asc. node	-77 Oct 21 j 08:46	18°♄14'55				-72 Sep 18 j 17:37	0°♆		
min. Earth dist.	-77 Oct 31 j 09:58	14°♄43'51	0.55698 AU			-72 Oct 28 j 23:12	0°♇		
opposition	-77 Nov 07 j 03:02	12°♄07'31	0°46'12			-72 Dec 06 j 13:25	0°♈		
greatest brilliancy	-77 Nov 06 j 19:29	12°♄14'51	-1.8m	evening set		-72 Dec 15 j 13:02	7°♈04'45		
direct	-77 Dec 13 j 02:29	3°♄59'39				-71 Jan 13 j 13:25	0°♉		
	-76 Mar 02 j 06:04	0°♊							
	-76 Apr 26 j 05:08	0°♋		conjunction		-71 Feb 20 j 19:40	29°♉54'47	0°-58'-39	
	-76 Jun 15 j 10:46	0°♌		minimum elong		-71 Feb 20 j 22:12	29°♉59'40	0°58'40	
	-76 Aug 01 j 21:14	0°♍				-71 Feb 20 j 22:22	0°♎		
evening set	-76 Aug 30 j 01:19	18°♍37'22				-71 Apr 01 j 12:35	0°♏		
	-76 Sep 15 j 19:14	0°♎		max. Earth dist.		-71 Apr 12 j 21:53	8°♏23'21	2.42717 AU	
max. Earth dist.	-76 Sep 15 j 22:49	0°♎06'09	2.53568 AU	morning rise		-71 Apr 28 j 05:19	19°♏29'14		
						-71 May 13 j 00:04	0°♐		
conjunction	-76 Oct 18 j 05:28	22°♎42'31	0°12'47	asc. node		-71 Jun 12 j 05:18	20°♐52'35		
minimum elong	-76 Oct 18 j 06:03	22°♎43'34	0°12'47			-71 Jun 25 j 19:25	0°♑		
behind sun begin	-76 Oct 17 j 16:37	22°♎19'34				-71 Aug 11 j 08:17	0°♒		
behind sun end	-76 Oct 18 j 19:30	23°♎07'34				-71 Sep 30 j 18:25	0°♓		
	-76 Oct 28 j 09:04	0°♑				-71 Dec 01 j 12:18	0°♑		
desc. node	-76 Nov 07 j 14:32	7°♑25'57		retrograde		-70 Jan 13 j 22:49	9°♑16'50		
	-76 Dec 07 j 23:58	0°♒		opposition		-70 Feb 21 j 13:57	0°♑25'39	4°15'37	
morning rise	-76 Dec 10 j 06:36	1°♒43'01		greatest brilliancy		-70 Feb 22 j 11:14	0°♑04'57	-1.4m	
	-75 Jan 16 j 05:42	0°♓				-70 Feb 22 j 16:20	30°♒♌		
	-75 Feb 23 j 19:51	0°♈		min. Earth dist.		-70 Feb 26 j 04:08	28°♒38'43	0.63868 AU	
	-75 Apr 03 j 14:52	0°♉		direct		-70 Apr 03 j 21:15	20°♒25'48		
	-75 May 13 j 14:31	0°♊				-70 May 16 j 23:00	0°♋		
	-75 Jun 25 j 01:46	0°♋		desc. node		-70 Jun 30 j 11:22	22°♋06'31		
	-75 Aug 11 j 11:55	0°♌				-70 Jul 13 j 17:29	0°♌		
asc. node	-75 Sep 07 j 08:19	14°♌23'36				-70 Aug 28 j 02:35	0°♍		
	-75 Oct 21 j 09:17	0°♍				-70 Oct 08 j 03:14	0°♎		
retrograde	-75 Nov 04 j 23:44	1°♍20'35				-70 Nov 16 j 01:33	0°♏		
	-75 Nov 18 j 23:19	30°♒♌				-70 Dec 24 j 07:29	0°♉		
min. Earth dist.	-75 Dec 11 j 23:14	22°♌38'52	0.64751 AU			-69 Jan 31 j 23:31	0°♎		
opposition	-75 Dec 15 j 02:26	21°♌23'28	3°29'02	evening set		-69 Feb 23 j 11:08	17°♎02'09		
greatest brilliancy	-75 Dec 14 j 12:31	21°♌37'25	-1.4m			-69 Mar 12 j 22:20	0°♏		
direct	-74 Jan 23 j 06:07	12°♌06'36				-69 Apr 23 j 17:55	0°♐		
	-74 Mar 28 j 14:19	0°♑							
	-74 May 24 j 22:17	0°♒		conjunction		-69 Apr 24 j 18:57	0°♄43'47	0°-3'-21	
	-74 Jul 13 j 10:20	0°♓		minimum elong		-69 Apr 24 j 19:11	0°♄44'10	0°03'23	
	-74 Aug 27 j 21:53	0°♅		behind sun begin		-69 Apr 23 j 19:41	0°♄03'07		
desc. node	-74 Sep 25 j 14:06	20°♅02'59		behind sun end		-69 Apr 25 j 18:40	1°♄25'11		
	-74 Oct 09 j 09:17	0°♆		asc. node		-69 Apr 30 j 05:05	4°♄30'33		
evening set	-74 Oct 15 j 12:21	4°♆28'38		max. Earth dist.		-69 May 27 j 16:07	23°♄18'10	2.55615 AU	
max. Earth dist.	-74 Nov 03 j 23:49	18°♆56'38	2.41007 AU			-69 Jun 06 j 15:40	0°♇		
	-74 Nov 18 j 14:20	0°♇		morning rise		-69 Jun 18 j 08:07	7°♇45'16		
						-69 Jul 22 j 13:55	0°♈		
conjunction	-74 Dec 12 j 05:27	18°♇12'27	0°-46'-26			-69 Sep 08 j 10:09	0°♉		
minimum elong	-74 Dec 12 j 02:54	18°♇07'30	0°46'25			-69 Oct 28 j 18:43	0°♊		
	-74 Dec 27 j 07:54	0°♈				-69 Dec 24 j 15:56	0°♋		
	-73 Feb 03 j 10:55	0°♉		retrograde		-68 Feb 26 j 22:33	18°♋02'50		
morning rise	-73 Feb 16 j 22:48	10°♉36'07		opposition		-68 Apr 02 j 23:09	10°♋26'56	2°05'36	
	-73 Mar 13 j 20:44	0°♊		greatest brilliancy		-68 Apr 03 j 21:52	10°♋06'20	-1.9m	
	-73 Apr 22 j 10:13	0°♋		min. Earth dist.		-68 Apr 10 j 21:57	7°♋34'41	0.53905 AU	
	-73 Jun 02 j 23:24	0°♌		direct		-68 May 12 j 12:52	1°♋13'09		
	-73 Jul 17 j 09:43	0°♍		desc. node		-68 May 17 j 10:25	1°♋22'40		
asc. node	-73 Jul 26 j 06:10	5°♍41'02				-68 Jul 29 j 11:08	0°♎		
	-73 Sep 04 j 11:53	0°♏				-68 Sep 12 j 14:45	0°♎		
	-73 Nov 07 j 22:12	0°♐				-68 Oct 23 j 05:16	0°♏		
retrograde	-73 Dec 09 j 14:05	5°♐25'33				-68 Dec 01 j 12:24	0°♉		
	-72 Jan 07 j 14:56	30°♒♋				-67 Jan 10 j 01:54	0°♊		
opposition	-72 Jan 18 j 12:02	25°♋49'53	4°33'21			-67 Feb 19 j 21:01	0°♋		
greatest brilliancy	-72 Jan 18 j 14:02	25°♋47'53	-1.2m	asc. node		-67 Mar 17 j 03:49	17°♋58'30		
min. Earth dist.	-72 Jan 19 j 05:30	25°♋32'28	0.67608 AU			-67 Apr 03 j 10:59	0°♌		
direct	-72 Feb 28 j 10:44	15°♋57'03		evening set		-67 Apr 18 j 20:47	10°♌32'10		
	-72 Apr 23 j 17:23	0°♌				-67 May 17 j 22:06	0°♍		
	-72 Jun 20 j 05:01	0°♍							

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 34

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

conjunction	-67 Jun 09 j 12:29	14°II49'56	0°45'23			-62 Aug 21 j 08:41	0°8	
minimum elong	-67 Jun 09 j 11:04	14°II47'37	0°45'22	retrograde		-62 Sep 12 j 04:18	3°812'13	
max. Earth dist.	-67 Jun 23 j 10:48	23°II52'04	2.64202 AU			-62 Oct 03 j 05:11	30°R9	
	-67 Jul 02 j 23:11	0°8		min. Earth dist.		-62 Oct 12 j 06:38	26°Y58'51	0.50843 AU
morning rise	-67 Jul 27 j 04:24	15°829'23		opposition		-62 Oct 20 j 00:06	24°Y05'49	0°-54'-12
	-67 Aug 19 j 01:24	0°9		greatest brilliancy		-62 Oct 19 j 14:45	24°Y14'33	-2.1m
	-67 Oct 05 j 19:05	0°n		asc. node		-62 Nov 07 j 00:17	18°Y27'32	
	-67 Nov 23 j 07:18	0°u		direct		-62 Nov 23 j 08:23	16°Y38'19	
	-66 Jan 12 j 21:10	0°m				-61 Jan 14 j 18:07	0°8	
	-66 Mar 13 j 00:11	0°x				-61 Mar 14 j 20:50	0°II	
desc. node	-66 Apr 04 j 09:12	7°x43'46				-61 May 05 j 14:43	0°8	
retrograde	-66 Apr 29 j 15:22	11°x19'55				-61 Jun 23 j 18:51	0°9	
opposition	-66 May 31 j 05:26	5°x45'28	-3°-26'-24			-61 Aug 09 j 20:53	0°n	
greatest brilliancy	-66 Jun 01 j 08:10	5°x25'36	-2.6m	evening set		-61 Aug 15 j 08:01	3°n34'20	
min. Earth dist.	-66 Jun 06 j 20:11	3°x48'07	0.41062 AU	max. Earth dist.		-61 Sep 04 j 11:23	16°n55'16	2.57799 AU
	-66 Jun 23 j 14:16	30°Rm				-61 Sep 23 j 18:52	0°u	
direct	-66 Jul 03 j 23:05	29°m15'14						
	-66 Jul 14 j 07:57	0°x		conjunction		-61 Oct 01 j 18:27	5°u29'26	0°32'22
	-66 Sep 20 j 09:42	0°8		minimum elong		-61 Oct 01 j 19:37	5°u31'27	0°32'22
	-66 Nov 04 j 08:43	0°≈				-61 Nov 05 j 13:27	0°m	
	-66 Dec 17 j 01:44	0°K		morning rise		-61 Nov 20 j 07:44	10°m40'51	
	-65 Jan 29 j 01:55	0°Y		desc. node		-61 Nov 25 j 07:31	14°m19'46	
asc. node	-65 Feb 02 j 02:25	2°Y46'05				-61 Dec 16 j 11:38	0°x	
	-65 Mar 14 j 07:13	0°8				-60 Jan 25 j 01:18	0°8	
	-65 Apr 28 j 22:04	0°II				-60 Mar 03 j 22:41	0°≈	
evening set	-65 Jun 01 j 05:24	21°II26'55				-60 Apr 12 j 00:30	0°K	
	-65 Jun 14 j 14:36	0°8				-60 May 22 j 09:23	0°Y	
max. Earth dist.	-65 Jul 17 j 10:31	20°854'45	2.67428 AU			-60 Jul 04 j 18:44	0°8	
						-60 Aug 24 j 22:13	0°II	
conjunction	-65 Jul 18 j 09:10	21°830'48	1°08'06	asc. node		-60 Sep 23 j 23:06	12°II26'52	
minimum elong	-65 Jul 18 j 08:39	21°830'00	1°08'06	retrograde		-60 Oct 22 j 00:10	17°II10'48	
	-65 Jul 31 j 16:53	0°9		min. Earth dist.		-60 Nov 26 j 06:21	9°II04'10	0.61897 AU
morning rise	-65 Sep 01 j 05:14	20°908'55		opposition		-60 Nov 30 j 20:58	7°II13'53	2°40'04
	-65 Sep 16 j 12:47	0°n		greatest brilliancy		-60 Nov 30 j 05:02	7°II29'46	-1.5m
	-65 Nov 01 j 16:13	0°u				-60 Dec 22 j 22:28	30°R8	
	-65 Dec 17 j 01:36	0°m		direct		-59 Jan 07 j 23:23	28°819'03	
	-64 Jan 30 j 23:02	0°x				-59 Jan 25 j 00:59	0°II	
desc. node	-64 Feb 20 j 08:36	13°x38'43				-59 Apr 10 j 02:55	0°8	
	-64 Mar 15 j 23:59	0°8				-59 Jun 02 j 10:49	0°9	
	-64 May 02 j 10:22	0°≈				-59 Jul 20 j 21:56	0°n	
retrograde	-64 Jul 17 j 09:12	28°≈30'25				-59 Sep 04 j 02:28	0°u	
min. Earth dist.	-64 Aug 13 j 03:35	24°≈04'04	0.39003 AU	evening set		-59 Sep 26 j 01:23	15°u17'19	
greatest brilliancy	-64 Aug 17 j 06:03	22°≈53'16	-2.8m	max. Earth dist.		-59 Oct 10 j 22:29	25°u54'48	2.46041 AU
opposition	-64 Aug 18 j 14:35	22°≈29'47	-6°-17'-45	desc. node		-59 Oct 12 j 05:52	26°u51'24	
direct	-64 Sep 17 j 11:40	17°≈15'46				-59 Oct 16 j 14:00	0°m	
	-64 Nov 05 j 08:49	0°K						
asc. node	-64 Dec 20 j 01:44	23°K30'36		conjunction		-59 Nov 18 j 14:01	24°m26'29	0°-23'-43
	-64 Dec 31 j 03:57	0°Y		minimum elong		-59 Nov 18 j 12:38	24°m23'52	0°23'44
	-63 Feb 18 j 10:17	0°8				-59 Nov 25 j 22:19	0°x	
	-63 Apr 07 j 17:08	0°II				-58 Jan 03 j 20:00	0°8	
	-63 May 25 j 20:06	0°8		morning rise		-58 Jan 18 j 13:25	11°831'17	
evening set	-63 Jul 08 j 10:02	27°824'10				-58 Feb 11 j 02:28	0°≈	
	-63 Jul 12 j 12:21	0°9		greatest brilliancy		-58 Feb 16 j 10:05	4°≈10'09	1.2m
max. Earth dist.	-63 Aug 08 j 21:52	17°930'44	2.65214 AU			-58 Mar 21 j 14:39	0°K	
						-58 Apr 30 j 06:01	0°Y	
conjunction	-63 Aug 23 j 05:06	26°945'59	1°03'59			-58 Jun 10 j 23:19	0°8	
minimum elong	-63 Aug 23 j 05:57	26°947'22	1°03'58			-58 Jul 26 j 00:38	0°II	
	-63 Aug 28 j 04:14	0°n		asc. node		-58 Aug 11 j 23:01	10°II27'52	
morning rise	-63 Oct 07 j 09:01	26°n37'41				-58 Sep 15 j 16:54	0°8	
	-63 Oct 12 j 09:02	0°u		retrograde		-58 Nov 26 j 04:41	22°838'38	
	-63 Nov 24 j 23:05	0°m		opposition		-57 Jan 05 j 07:52	12°851'34	4°18'16
	-62 Jan 06 j 01:34	0°x		greatest brilliancy		-57 Jan 05 j 02:28	12°856'59	-1.2m
desc. node	-62 Jan 07 j 08:47	0°x56'30		min. Earth dist.		-57 Jan 04 j 12:50	13°810'38	0.67258 AU
	-62 Feb 16 j 00:19	0°8		direct		-57 Feb 14 j 17:43	3°809'37	
	-62 Mar 28 j 09:51	0°≈				-57 May 08 j 07:08	0°9	
	-62 May 08 j 09:07	0°K				-57 Jun 30 j 02:36	0°n	
	-62 Jun 21 j 10:08	0°Y				-57 Aug 15 j 13:25	0°u	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 35

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

desc. node	-57 Aug 30 j 04:57	10°♄02'33			-52 Jul 09 j 20:32	0°♄	
	-57 Sep 27 j 06:46	0°♌		morning rise	-52 Jul 12 j 10:49	1°♄40'01	
	-57 Nov 06 j 11:07	0°♏			-52 Aug 26 j 02:52	0°♏	
evening set	-57 Nov 20 j 04:53	10°♏34'33			-52 Oct 13 j 13:27	0°♐	
	-57 Dec 15 j 01:52	0°♑			-52 Dec 02 j 22:25	0°♑	
	-56 Jan 22 j 02:12	0°♒			-51 Jan 28 j 10:04	0°♒	
				retrograde	-51 Apr 02 j 02:39	18°♒01'21	
conjunction	-56 Jan 24 j 01:17	1°♒32'50	-1°-5'-17	desc. node	-51 Apr 21 j 01:47	15°♒46'32	
minimum elong	-56 Jan 24 j 01:05	1°♒32'27	1°05'19	opposition	-51 May 05 j 12:15	11°♒36'02	0°-48'-59
	-56 Feb 29 j 10:37	0°♓		greatest brilliancy	-51 May 05 j 21:59	11°♒28'04	-2.3m
max. Earth dist.	-56 Feb 29 j 15:01	0°♓08'30	2.37983 AU	min. Earth dist.	-51 May 13 j 20:51	8°♒52'07	0.45835 AU
morning rise	-56 Apr 02 j 17:33	25°♓20'30		direct	-51 Jun 11 j 04:19	3°♒45'34	
	-56 Apr 08 j 23:28	0°♈			-51 Aug 21 j 12:16	0°♈	
	-56 May 20 j 09:49	0°♉			-51 Oct 05 j 14:46	0°♉	
asc. node	-56 Jun 28 j 21:58	27°♉04'37			-51 Nov 15 j 22:35	0°♊	
	-56 Jul 03 j 07:37	0°♊			-51 Dec 26 j 20:12	0°♊	
	-56 Aug 19 j 10:25	0°♋			-50 Feb 06 j 16:14	0°♈	
	-56 Oct 11 j 05:06	0°♌		asc. node	-50 Feb 18 j 18:38	8°♈29'09	
retrograde	-56 Dec 30 j 06:47	26°♌02'00			-50 Mar 22 j 01:38	0°♉	
opposition	-55 Feb 07 j 13:16	16°♌50'35	4°32'49		-50 May 06 j 02:54	0°♊	
greatest brilliancy	-55 Feb 08 j 03:30	16°♌36'35	-1.3m	evening set	-50 May 16 j 07:18	6°♊39'03	
min. Earth dist.	-55 Feb 10 j 15:32	15°♌37'35	0.66116 AU		-50 Jun 21 j 11:27	0°♋	
direct	-55 Mar 20 j 22:01	6°♌49'20					
	-55 Jun 02 j 08:18	0°♐		conjunction	-50 Jul 03 j 18:47	7°♋52'26	1°02'28
desc. node	-55 Jul 17 j 04:02	25°♐54'34		minimum elong	-50 Jul 03 j 17:47	7°♋50'50	1°02'28
	-55 Jul 23 j 14:18	0°♑		max. Earth dist.	-50 Jul 08 j 07:02	10°♋45'17	2.66820 AU
	-55 Sep 05 j 16:20	0°♒			-50 Aug 07 j 12:01	0°♌	
	-55 Oct 16 j 06:28	0°♓		morning rise	-50 Aug 18 j 07:47	6°♌53'17	
	-55 Nov 23 j 23:54	0°♑			-50 Sep 23 j 13:55	0°♐	
	-54 Jan 01 j 02:00	0°♒			-50 Nov 09 j 09:40	0°♑	
evening set	-54 Jan 28 j 06:07	21°♒15'05			-50 Dec 26 j 02:53	0°♒	
	-54 Feb 08 j 13:52	0°♓			-49 Feb 11 j 10:49	0°♓	
	-54 Mar 20 j 07:59	0°♈		desc. node	-49 Mar 09 j 01:43	15°♓41'55	
					-49 Apr 02 j 17:54	0°♑	
conjunction	-54 Apr 02 j 14:56	9°♈44'29	0°-26'-57	retrograde	-49 Jun 18 j 11:31	27°♑05'05	
minimum elong	-54 Apr 02 j 16:45	9°♈47'48	0°26'56	opposition	-49 Jul 18 j 19:11	22°♑02'15	-6°-46'-50
	-54 Apr 30 j 22:56	0°♉		min. Earth dist.	-49 Jul 18 j 07:00	22°♑10'20	0.37422 AU
max. Earth dist.	-54 May 13 j 22:54	9°♉03'49	2.50947 AU	greatest brilliancy	-49 Jul 18 j 16:43	22°♑03'52	-2.9m
asc. node	-54 May 16 j 20:20	11°♉03'46		direct	-49 Aug 17 j 15:23	17°♑05'13	
morning rise	-54 May 31 j 08:51	20°♉59'37			-49 Oct 04 j 16:11	0°♒	
	-54 Jun 13 j 18:02	0°♊			-49 Nov 27 j 02:21	0°♓	
	-54 Jul 29 j 18:47	0°♋		asc. node	-48 Jan 06 j 16:29	25°♓48'43	
	-54 Sep 16 j 06:20	0°♌			-48 Jan 13 j 04:07	0°♈	
	-54 Nov 07 j 20:04	0°♍			-48 Feb 28 j 14:13	0°♉	
	-53 Jan 19 j 22:21	0°♎			-48 Apr 15 j 12:28	0°♊	
retrograde	-53 Feb 08 j 09:10	2°♎07'36			-48 Jun 01 j 22:37	0°♋	
	-53 Feb 26 j 16:59	30°♎		evening set	-48 Jun 23 j 21:13	13°♋51'51	
opposition	-53 Mar 17 j 14:56	23°♎57'12	3°13'49		-48 Jul 19 j 07:41	0°♌	
greatest brilliancy	-53 Mar 18 j 17:45	23°♎31'59	-1.6m	max. Earth dist.	-48 Jul 30 j 19:34	7°♌19'52	2.66725 AU
min. Earth dist.	-53 Mar 24 j 09:58	21°♎24'25	0.58467 AU				
direct	-53 Apr 27 j 05:08	14°♎15'40		conjunction	-48 Aug 08 j 21:00	13°♌08'01	1°08'46
desc. node	-53 Jun 04 j 02:15	22°♎14'59		minimum elong	-48 Aug 08 j 21:22	13°♌08'37	1°08'46
	-53 Jun 21 j 20:07	0°♏			-48 Sep 03 j 23:48	0°♐	
	-53 Aug 12 j 02:05	0°♐		morning rise	-48 Sep 22 j 12:22	12°♐06'47	
	-53 Sep 23 j 17:46	0°♑			-48 Oct 19 j 11:24	0°♑	
	-53 Nov 02 j 09:34	0°♒			-48 Dec 02 j 14:50	0°♒	
	-53 Dec 11 j 02:53	0°♓			-47 Jan 14 j 12:30	0°♓	
	-52 Jan 19 j 04:59	0°♈		desc. node	-47 Jan 24 j 00:33	6°♓44'39	
	-52 Feb 28 j 13:42	0°♉			-47 Feb 25 j 11:51	0°♑	
evening set	-52 Mar 30 j 04:19	21°♈54'14			-47 Apr 08 j 05:03	0°♒	
asc. node	-52 Apr 02 j 20:03	24°♈28'15			-47 May 21 j 09:17	0°♓	
	-52 Apr 10 j 18:17	0°♉			-47 Jul 11 j 16:22	0°♈	
				retrograde	-47 Aug 23 j 19:51	11°♈23'22	
conjunction	-52 May 23 j 16:29	29°♉10'11	0°29'22	min. Earth dist.	-47 Sep 20 j 19:48	6°♈01'40	0.45654 AU
minimum elong	-52 May 23 j 15:14	29°♉08'06	0°29'21	opposition	-47 Sep 28 j 21:40	3°♈13'20	-2°-59'-3
	-52 May 24 j 22:26	0°♊		greatest brilliancy	-47 Sep 27 j 17:19	3°♈38'05	-2.4m
max. Earth dist.	-52 Jun 13 j 13:50	12°♊57'24	2.61464 AU		-47 Oct 08 j 20:56	30°♈	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 36

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

direct	-47 Oct 31 j 10:49	26° X 36'04		evening set	-42 Oct 27 j 15:27	16° M 58'13	
asc. node	-47 Nov 23 j 16:16	29° X 48'58			-42 Nov 13 j 20:56	0° X	
	-47 Nov 24 j 09:10	0° Y		max. Earth dist.	-42 Nov 26 j 15:03	9° X 47'26	2.38633 AU
	-46 Jan 31 j 03:55	0° X			-42 Dec 22 j 13:48	0° Z	
	-46 Mar 24 j 14:12	0° II					
	-46 May 13 j 10:53	0° S		conjunction	-42 Dec 26 j 23:03	3° Z 26'38	0°-56'-42
	-46 Jun 30 j 21:25	0° Q		minimum elong	-42 Dec 26 j 20:37	3° Z 21'49	0°56'42
evening set	-46 Jul 31 j 08:59	19° Q 23'12			-41 Jan 29 j 15:43	0° \approx	
	-46 Aug 16 j 17:59	0° M		morning rise	-41 Mar 05 j 21:22	27° \approx 34'38	
max. Earth dist.	-46 Aug 24 j 11:41	5° M 04'12	2.61283 AU		-41 Mar 09 j 00:29	0° X	
					-41 Apr 17 j 12:49	0° Y	
conjunction	-46 Sep 15 j 18:09	19° M 52'04	0°47'54		-41 May 28 j 23:21	0° X	
minimum elong	-46 Sep 15 j 19:26	19° M 54'13	0°47'53		-41 Jul 12 j 02:35	0° II	
	-46 Sep 30 j 17:27	0° A		asc. node	-41 Jul 16 j 13:21	2° II 54'09	
morning rise	-46 Nov 01 j 22:54	22° A 20'31			-41 Aug 29 j 04:54	0° S	
	-46 Nov 12 j 18:17	0° M			-41 Oct 25 j 19:09	0° Q	
desc. node	-46 Dec 11 j 23:19	21° M 06'06		retrograde	-41 Dec 17 j 08:33	13° Q 10'58	
	-46 Dec 24 j 01:31	0° X		opposition	-40 Jan 26 j 02:28	3° Q 43'00	4°36'41
	-45 Feb 02 j 01:29	0° Z		greatest brilliancy	-40 Jan 26 j 08:53	3° Q 36'38	-1.2m
	-45 Mar 13 j 09:10	0° \approx		min. Earth dist.	-40 Jan 27 j 16:24	3° Q 05'22	0.67354 AU
	-45 Apr 21 j 22:06	0° X			-40 Feb 04 j 16:53	30° R S	
	-45 Jun 02 j 00:24	0° Y		direct	-40 Mar 07 j 06:38	23° S 45'49	
	-45 Jul 17 j 07:53	0° X			-40 Apr 10 j 22:01	0° Q	
	-45 Sep 21 j 23:59	0° II			-40 Jun 13 j 19:50	0° M	
retrograde	-45 Oct 08 j 04:31	1° II 44'08			-40 Aug 01 j 08:35	0° A	
asc. node	-45 Oct 11 j 16:06	1° II 38'58		desc. node	-40 Aug 02 j 19:55	0° A 58'26	
	-45 Oct 23 j 18:18	30° R			-40 Sep 13 j 17:10	0° M	
min. Earth dist.	-45 Nov 10 j 12:45	24° X 17'54	0.58124 AU		-40 Oct 24 j 01:33	0° X	
opposition	-45 Nov 16 j 12:58	21° X 56'09	1°33'42		-40 Dec 01 j 16:49	0° Z	
greatest brilliancy	-45 Nov 16 j 00:04	22° X 08'50	-1.7m	evening set	-40 Dec 31 j 08:24	23° Z 23'44	
direct	-45 Dec 23 j 08:32	13° X 29'36			-39 Jan 08 j 17:14	0° \approx	
	-44 Feb 21 j 22:03	0° II			-39 Feb 16 j 02:41	0° X	
	-44 Apr 20 j 05:31	0° S					
	-44 Jun 10 j 08:49	0° Q		conjunction	-39 Mar 08 j 09:21	15° X 30'16	0°-49'-4
	-44 Jul 28 j 03:35	0° M		minimum elong	-39 Mar 08 j 12:16	15° X 35'47	0°49'04
evening set	-44 Sep 08 j 11:14	28° M 08'43			-39 Mar 27 j 17:37	0° Y	
	-44 Sep 11 j 04:16	0° A		max. Earth dist.	-39 Apr 26 j 08:34	21° Y 34'37	2.45730 AU
max. Earth dist.	-44 Sep 23 j 23:21	8° A 50'58	2.51018 AU		-39 May 08 j 05:16	0° X	
	-44 Oct 23 j 17:46	0° M		morning rise	-39 May 11 j 01:19	1° X 59'42	
				asc. node	-39 Jun 02 j 12:41	17° X 33'21	
conjunction	-44 Oct 28 j 21:51	3° M 45'11	0°00'01		-39 Jun 20 j 23:09	0° II	
minimum elong	-44 Oct 28 j 21:53	3° M 45'14	0°00'01		-39 Aug 06 j 05:20	0° S	
behind sun begin	-44 Oct 28 j 04:04	3° M 12'52			-39 Sep 24 j 17:06	0° Q	
behind sun end	-44 Oct 29 j 15:41	4° M 17'38			-39 Nov 20 j 10:30	0° M	
desc. node	-44 Oct 28 j 22:04	3° M 45'35		retrograde	-38 Jan 22 j 18:13	17° M 35'28	
	-44 Dec 03 j 06:32	0° X		opposition	-38 Mar 01 j 23:18	8° M 57'12	3°58'12
morning rise	-44 Dec 23 j 10:08	15° X 21'09		greatest brilliancy	-38 Mar 02 j 23:35	8° M 33'50	-1.5m
	-43 Jan 11 j 09:22	0° Z		min. Earth dist.	-38 Mar 07 j 09:19	6° M 52'21	0.62217 AU
	-43 Feb 18 j 20:16	0° \approx			-38 Mar 30 j 21:36	30° R Q	
	-43 Mar 29 j 11:56	0° X		direct	-38 Apr 12 j 03:21	29° Q 01'04	
	-43 May 08 j 07:11	0° Y			-38 Apr 24 j 20:15	0° M	
	-43 Jun 19 j 08:54	0° X		desc. node	-38 Jun 20 j 19:28	21° M 14'30	
	-43 Aug 04 j 13:54	0° II			-38 Jul 06 j 13:01	0° A	
asc. node	-43 Aug 28 j 14:24	13° II 50'35			-38 Aug 22 j 07:11	0° M	
	-43 Oct 01 j 10:06	0° S			-38 Oct 02 j 18:32	0° X	
retrograde	-43 Nov 12 j 19:11	9° S 33'05			-38 Nov 10 j 21:43	0° Z	
min. Earth dist.	-43 Dec 20 j 16:19	0° S 33'41	0.65919 AU		-38 Dec 19 j 06:29	0° \approx	
opposition	-43 Dec 22 j 23:30	29° II 38'22	3°51'02		-37 Jan 27 j 00:50	0° X	
greatest brilliancy	-43 Dec 22 j 12:01	29° II 49'52	-1.3m		-37 Mar 08 j 02:00	0° Y	
	-43 Dec 22 j 01:55	30° R II		evening set	-37 Mar 09 j 04:46	0° Y 49'04	
direct	-42 Jan 31 j 15:31	20° II 11'18			-37 Apr 18 j 23:33	0° X	
	-42 Mar 17 j 17:13	0° S		asc. node	-37 Apr 20 j 10:43	1° X 01'24	
	-42 May 18 j 19:15	0° Q					
	-42 Jul 08 j 06:29	0° M		conjunction	-37 May 06 j 06:36	11° X 58'08	0°09'37
	-42 Aug 23 j 01:50	0° A		minimum elong	-37 May 06 j 06:04	11° X 57'14	0°09'36
desc. node	-42 Sep 15 j 20:45	16° A 31'13		behind sun begin	-37 May 05 j 11:34	11° X 25'31	
	-42 Oct 04 j 15:44	0° M		behind sun end	-37 May 07 j 00:34	12° X 28'55	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 37

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-37 Jun 01 j 22:31	0°♂		direct	-32 Oct 04 j 15:07	2°♂59'42	
max. Earth dist.	-37 Jun 03 j 16:03	1°♂09'14	2.57933 AU	asc. node	-32 Dec 10 j 08:10	24°♂02'43	
morning rise	-37 Jun 27 j 20:33	17°♂05'29			-32 Dec 21 j 17:28	0°♂	
	-37 Jul 17 j 19:29	0°♂			-31 Feb 11 j 22:01	0°♂	
	-37 Sep 03 j 08:59	0°♂			-31 Apr 02 j 07:11	0°♂	
	-37 Oct 22 j 20:28	0°♂			-31 May 20 j 22:22	0°♂	
	-37 Dec 15 j 10:11	0°♂			-31 Jul 07 j 20:20	0°♂	
retrograde	-36 Mar 09 j 15:23	28°♂25'08		evening set	-31 Jul 16 j 18:07	5°♂39'03	
opposition	-36 Apr 13 j 20:22	21°♂11'53	1°12'24	max. Earth dist.	-31 Aug 14 j 12:33	24°♂06'53	2.64026 AU
greatest brilliancy	-36 Apr 14 j 11:27	20°♂58'38	-2.0m		-31 Aug 23 j 13:46	0°♂	
min. Earth dist.	-36 Apr 22 j 05:22	18°♂15'32	0.51126 AU				
desc. node	-36 May 07 j 17:54	13°♂51'55		conjunction	-31 Aug 31 j 15:04	5°♂16'24	0°59'16
direct	-36 May 22 j 15:01	12°♂21'12		minimum elong	-31 Aug 31 j 16:09	5°♂18'10	0°59'15
	-36 Jul 19 j 00:23	0°♂			-31 Oct 07 j 16:41	0°♂	
	-36 Sep 05 j 10:56	0°♂		morning rise	-31 Oct 16 j 07:55	5°♂52'31	
	-36 Oct 17 j 01:01	0°♂			-31 Nov 20 j 02:06	0°♂	
	-36 Nov 25 j 20:08	0°♂		desc. node	-31 Dec 28 j 15:31	27°♂38'13	
	-35 Jan 04 j 17:40	0°♂			-31 Dec 31 j 21:19	0°♂	
	-35 Feb 14 j 19:11	0°♂			-30 Feb 10 j 11:08	0°♂	
asc. node	-35 Mar 07 j 10:03	14°♂37'18			-30 Mar 22 j 09:35	0°♂	
	-35 Mar 29 j 14:00	0°♂			-30 May 01 j 16:26	0°♂	
evening set	-35 Apr 29 j 06:36	20°♂45'39			-30 Jun 13 j 04:03	0°♂	
	-35 May 13 j 04:46	0°♂			-30 Aug 02 j 11:37	0°♂	
				retrograde	-30 Sep 22 j 02:33	14°♂30'46	
conjunction	-35 Jun 18 j 15:09	23°♂45'57	0°52'51	min. Earth dist.	-30 Oct 23 j 08:58	7°♂50'31	0.53586 AU
minimum elong	-35 Jun 18 j 13:48	23°♂43'45	0°52'51	asc. node	-30 Oct 28 j 07:11	5°♂57'45	
	-35 Jun 28 j 07:27	0°♂		opposition	-30 Oct 30 j 14:43	5°♂04'32	0°06'38
max. Earth dist.	-35 Jun 29 j 02:18	0°♂30'18	2.65368 AU	greatest brilliancy	-29 Jul 23 j 13:40	21°♂50'29	-4.8m
morning rise	-35 Aug 04 j 09:11	23°♂40'30			-30 Nov 14 j 14:54	30°♂♂	
	-35 Aug 14 j 08:18	0°♂		direct	-30 Dec 04 j 21:52	27°♂13'38	
	-35 Sep 30 j 19:05	0°♂			-30 Dec 26 j 18:35	0°♂	
	-35 Nov 17 j 13:35	0°♂			-29 Mar 07 j 16:51	0°♂	
	-34 Jan 05 j 07:58	0°♂			-29 Apr 30 j 02:40	0°♂	
	-34 Feb 26 j 15:14	0°♂			-29 Jun 18 j 21:14	0°♂	
desc. node	-34 Mar 25 j 16:46	13°♂19'01			-29 Aug 05 j 04:57	0°♂	
retrograde	-34 May 17 j 01:29	26°♂56'23		evening set	-29 Aug 24 j 05:05	12°♂29'32	
opposition	-34 Jun 16 j 18:22	21°♂45'42	-4°-58'-59	max. Earth dist.	-29 Sep 11 j 08:56	24°♂41'12	2.55535 AU
greatest brilliancy	-34 Jun 17 j 19:01	21°♂28'33	-2.8m		-29 Sep 19 j 03:57	0°♂	
min. Earth dist.	-34 Jun 21 j 10:20	20°♂28'10	0.39051 AU				
direct	-34 Jul 18 j 16:32	16°♂00'51		conjunction	-29 Oct 11 j 12:28	15°♂30'58	0°21'32
	-34 Sep 06 j 00:26	0°♂		minimum elong	-29 Oct 11 j 13:22	15°♂32'33	0°21'30
	-34 Oct 26 j 16:51	0°♂			-29 Oct 31 j 20:58	0°♂	
	-34 Dec 10 j 06:16	0°♂		desc. node	-29 Nov 15 j 14:03	10°♂40'42	
asc. node	-33 Jan 23 j 09:27	0°♂06'12		morning rise	-29 Dec 01 j 20:39	22°♂40'52	
	-33 Jan 23 j 05:47	0°♂			-29 Dec 11 j 15:47	0°♂	
	-33 Mar 09 j 01:03	0°♂			-28 Jan 20 j 01:31	0°♂	
	-33 Apr 24 j 00:40	0°♂			-28 Feb 27 j 18:50	0°♂	
	-33 Jun 09 j 22:04	0°♂			-28 Apr 06 j 16:07	0°♂	
evening set	-33 Jun 10 j 00:06	0°♂03'13			-28 May 16 j 18:22	0°♂	
max. Earth dist.	-33 Jul 22 j 18:37	27°♂14'59	2.67408 AU		-28 Jun 28 j 11:35	0°♂	
					-28 Aug 15 j 22:50	0°♂	
conjunction	-33 Jul 26 j 14:56	29°♂42'04	1°09'30	asc. node	-28 Sep 14 j 06:52	14°♂35'47	
minimum elong	-33 Jul 26 j 14:45	29°♂41'46	1°09'30	retrograde	-28 Oct 30 j 02:20	25°♂50'43	
	-33 Jul 27 j 02:11	0°♂		min. Earth dist.	-28 Dec 05 j 08:04	17°♂24'10	0.63595 AU
morning rise	-33 Sep 09 j 06:13	28°♂19'25		greatest brilliancy	-28 Dec 08 j 11:52	16°♂08'22	-1.4m
	-33 Sep 11 j 20:27	0°♂		opposition	-28 Dec 09 j 03:14	15°♂53'01	3°10'30
	-33 Oct 27 j 17:39	0°♂		direct	-27 Jan 16 j 20:31	6°♂45'15	
	-33 Dec 11 j 14:58	0°♂			-27 Apr 02 j 11:10	0°♂	
	-32 Jan 24 j 15:44	0°♂			-27 May 27 j 21:40	0°♂	
desc. node	-32 Feb 10 j 16:48	11°♂43'04			-27 Jul 15 j 23:50	0°♂	
	-32 Mar 08 j 06:03	0°♂			-27 Aug 30 j 09:32	0°♂	
	-32 Apr 21 j 13:40	0°♂		desc. node	-27 Oct 02 j 13:48	23°♂14'56	
	-32 Jun 10 j 10:38	0°♂		evening set	-27 Oct 06 j 19:37	26°♂18'01	
retrograde	-32 Aug 01 j 05:08	15°♂29'45			-27 Oct 11 j 22:15	0°♂	
min. Earth dist.	-32 Aug 27 j 19:07	10°♂51'55	0.40973 AU	max. Earth dist.	-27 Oct 22 j 23:54	8°♂05'56	2.43207 AU
greatest brilliancy	-32 Sep 02 j 07:07	9°♂10'05	-2.6m		-27 Nov 21 j 05:28	0°♂	
opposition	-32 Sep 03 j 20:26	8°♂41'01	-5°-14'-23				

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 38

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

conjunction	-27 Dec 01 j 13:11	7°♂53'21	0°-37'-6		-22 Sep 10 j 23:10	0°♂	
minimum elong	-27 Dec 01 j 11:00	7°♂49'11	0°37'06		-22 Nov 01 j 01:28	0°♂	
	-27 Dec 30 j 01:16	0°♂			-22 Dec 31 j 13:50	0°♂	
morning rise	-26 Feb 03 j 20:38	28°♂07'50		retrograde	-21 Feb 18 j 14:44	11°♂26'02	
	-26 Feb 06 j 05:40	0°♂		opposition	-21 Mar 27 j 05:46	3°♂33'49	2°37'36
	-26 Mar 16 j 15:51	0°♂		greatest brilliancy	-21 Mar 28 j 07:16	3°♂10'18	-1.8m
	-26 Apr 25 j 05:06	0°♂		min. Earth dist.	-21 Apr 03 j 17:39	0°♂48'25	0.56042 AU
	-26 Jun 05 j 18:18	0°♂			-21 Apr 06 j 00:04	30°♂♂	
	-26 Jul 20 j 08:10	0°♂		direct	-21 May 06 j 08:44	24°♂05'31	
asc. node	-26 Aug 02 j 04:48	8°♂09'26		desc. node	-21 May 25 j 10:03	26°♂21'24	
	-26 Sep 08 j 04:16	0°♂			-21 Jun 07 j 02:13	0°♂	
	-26 Nov 25 j 07:54	0°♂			-21 Aug 04 j 17:07	0°♂	
retrograde	-26 Dec 03 j 20:42	0°♂27'05			-21 Sep 17 j 14:47	0°♂	
	-26 Dec 12 j 03:56	30°♂♂			-21 Oct 27 j 18:25	0°♂	
opposition	-25 Jan 12 j 22:00	20°♂45'58	4°28'24		-21 Dec 05 j 18:38	0°♂	
greatest brilliancy	-25 Jan 12 j 20:37	20°♂47'21	-1.2m		-20 Jan 14 j 01:49	0°♂	
min. Earth dist.	-25 Jan 12 j 23:17	20°♂44'42	0.67587 AU		-20 Feb 23 j 14:59	0°♂	
direct	-25 Feb 22 j 16:00	10°♂57'29		asc. node	-20 Mar 24 j 02:40	21°♂02'05	
	-25 Apr 30 j 03:56	0°♂			-20 Apr 05 j 23:17	0°♂	
	-25 Jun 24 j 09:53	0°♂		evening set	-20 Apr 10 j 14:50	3°♂12'39	
	-25 Aug 10 j 11:59	0°♂			-20 May 20 j 05:58	0°♂	
desc. node	-25 Aug 20 j 13:02	6°♂48'18					
	-25 Sep 22 j 10:50	0°♂		conjunction	-20 Jun 02 j 11:03	8°♂43'37	0°39'07
	-25 Nov 01 j 16:45	0°♂		minimum elong	-20 Jun 02 j 09:39	8°♂41'17	0°39'06
evening set	-25 Dec 04 j 16:56	25°♂35'26		max. Earth dist.	-20 Jun 19 j 11:50	19°♂51'07	2.63077 AU
	-25 Dec 10 j 07:41	0°♂			-20 Jul 05 j 04:34	0°♂	
	-24 Jan 17 j 07:40	0°♂		morning rise	-20 Jul 20 j 23:39	10°♂07'20	
					-20 Aug 21 j 07:46	0°♂	
conjunction	-24 Feb 09 j 08:09	18°♂05'33	-1°-3'-20		-20 Oct 08 j 07:36	0°♂	
minimum elong	-24 Feb 09 j 09:45	18°♂08'39	1°03'20		-20 Nov 26 j 12:11	0°♂	
	-24 Feb 24 j 15:36	0°♂			-19 Jan 17 j 23:19	0°♂	
max. Earth dist.	-24 Mar 29 j 17:28	25°♂56'35	2.40383 AU		-19 Apr 03 j 10:53	0°♂	
	-24 Apr 04 j 04:04	0°♂		desc. node	-19 Apr 11 j 09:16	0°♂53'45	
morning rise	-24 Apr 17 j 14:29	9°♂54'27		retrograde	-19 Apr 17 j 01:26	1°♂05'35	
	-24 May 15 j 13:28	0°♂			-19 Apr 30 j 05:28	30°♂♂	
asc. node	-24 Jun 19 j 03:35	23°♂51'15		opposition	-19 May 19 j 10:30	25°♂08'30	-2°-15'00
	-24 Jun 28 j 08:00	0°♂		greatest brilliancy	-19 May 20 j 08:32	24°♂51'19	-2.5m
	-24 Aug 14 j 00:11	0°♂		min. Earth dist.	-19 May 27 j 02:01	22°♂46'03	0.43081 AU
	-24 Oct 04 j 03:51	0°♂		direct	-19 Jun 23 j 13:15	18°♂00'31	
	-24 Dec 11 j 07:44	0°♂			-19 Aug 07 j 10:22	0°♂	
retrograde	-23 Jan 07 j 13:11	4°♂00'50			-19 Sep 27 j 04:22	0°♂	
	-23 Feb 01 j 16:14	30°♂♂			-19 Nov 09 j 02:48	0°♂	
opposition	-23 Feb 15 j 12:21	25°♂00'06	4°24'17		-19 Dec 20 j 20:33	0°♂	
greatest brilliancy	-23 Feb 16 j 06:39	24°♂42'13	-1.3m		-18 Feb 01 j 05:40	0°♂	
min. Earth dist.	-23 Feb 19 j 10:57	23°♂27'48	0.65005 AU	asc. node	-18 Feb 09 j 01:01	5°♂25'39	
direct	-23 Mar 28 j 21:46	14°♂58'49			-18 Mar 17 j 00:13	0°♂	
	-23 May 24 j 01:21	0°♂			-18 May 01 j 07:41	0°♂	
desc. node	-23 Jul 07 j 11:15	23°♂51'28		evening set	-18 May 25 j 12:35	15°♂41'12	
	-23 Jul 17 j 11:04	0°♂			-18 Jun 16 j 19:46	0°♂	
	-23 Aug 31 j 07:11	0°♂					
	-23 Oct 11 j 03:52	0°♂		conjunction	-18 Jul 12 j 04:55	16°♂11'50	1°06'13
	-23 Nov 19 j 00:25	0°♂		minimum elong	-18 Jul 12 j 04:11	16°♂10'40	1°06'13
	-23 Dec 27 j 04:29	0°♂		max. Earth dist.	-18 Jul 13 j 14:20	17°♂05'04	2.67258 AU
	-22 Feb 03 j 17:53	0°♂			-18 Aug 02 j 21:01	0°♂	
evening set	-22 Feb 12 j 07:53	6°♂34'02		morning rise	-18 Aug 26 j 07:13	14°♂56'34	
	-22 Mar 15 j 13:30	0°♂			-18 Sep 18 j 19:24	0°♂	
					-18 Nov 04 j 05:45	0°♂	
conjunction	-22 Apr 15 j 12:56	22°♂26'32	0°-13'-19		-18 Dec 20 j 04:05	0°♂	
minimum elong	-22 Apr 15 j 13:48	22°♂28'04	0°13'19		-17 Feb 03 j 23:17	0°♂	
behind sun begin	-22 Apr 15 j 00:10	22°♂03'50		desc. node	-17 Feb 27 j 08:21	15°♂09'51	
behind sun end	-22 Apr 16 j 03:26	22°♂52'18			-17 Mar 22 j 16:40	0°♂	
	-22 Apr 26 j 05:33	0°♂			-17 May 13 j 21:55	0°♂	
asc. node	-22 May 07 j 03:46	7°♂37'32		retrograde	-17 Jul 05 j 19:46	15°♂20'36	
max. Earth dist.	-22 May 22 j 02:33	17°♂54'11	2.53599 AU	min. Earth dist.	-17 Aug 02 j 11:59	10°♂50'37	0.37933 AU
	-22 Jun 09 j 00:34	0°♂		greatest brilliancy	-17 Aug 05 j 02:45	10°♂07'35	-2.8m
morning rise	-22 Jun 10 j 20:37	1°♂13'34		opposition	-17 Aug 06 j 00:20	9°♂52'47	-6°-47'-11
	-22 Jul 24 j 22:15	0°♂		direct	-17 Sep 04 j 13:38	4°♂53'17	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 39

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-17 Nov 16 j 09:25	0° H		minimum elong	-12 Nov 09 j 06:06	15° M 31'42	0°13'27
asc. node	-17 Dec 28 j 00:13	24° H 27'11		behind sun begin	-12 Nov 08 j 16:48	15° M 07'02	
	-16 Jan 05 j 23:51	0° Y		behind sun end	-12 Nov 09 j 19:24	15° M 56'23	
	-16 Feb 22 j 18:42	0° B			-12 Nov 28 j 13:14	0° J	
	-16 Apr 10 j 09:07	0° II		morning rise	-11 Jan 06 j 16:20	0° Z 05'06	
	-16 May 28 j 03:47	0° S			-11 Jan 06 j 13:43	0° Z	
evening set	-16 Jul 02 j 05:32	22° S 05'32			-11 Feb 13 j 22:15	0° \approx	
	-16 Jul 14 j 16:57	0° Ω			-11 Mar 24 j 11:21	0° H	
max. Earth dist.	-16 Aug 05 j 03:35	13° Ω 41'17	2.65993 AU		-11 May 03 j 03:08	0° Y	
					-11 Jun 13 j 21:57	0° B	
conjunction	-16 Aug 17 j 01:19	21° Ω 21'08	1°06'27		-11 Jul 29 j 06:33	0° II	
minimum elong	-16 Aug 17 j 01:58	21° Ω 22'12	1°06'28	asc. node	-11 Aug 18 j 21:08	12° II 27'23	
	-16 Aug 30 j 09:23	0° M			-11 Sep 20 j 14:01	0° S	
morning rise	-16 Sep 30 j 22:08	20° M 45'10		retrograde	-11 Nov 20 j 12:27	17° S 34'56	
	-16 Oct 14 j 17:48	0° $\underline{\text{A}}$		min. Earth dist.	-11 Dec 29 j 05:59	8° S 19'05	0.66786 AU
	-16 Nov 27 j 14:14	0° M		opposition	-11 Dec 30 j 16:59	7° S 44'02	4°08'29
	-15 Jan 09 j 01:07	0° J		greatest brilliancy	-11 Dec 30 j 08:40	7° S 52'21	-1.3m
desc. node	-15 Jan 14 j 08:15	3° J 48'17			-10 Jan 22 j 18:28	30° R II	
	-15 Feb 19 j 10:00	0° Z		direct	-10 Feb 08 j 19:41	28° II 08'05	
	-15 Apr 01 j 07:21	0° \approx			-10 Feb 26 j 23:19	0° S	
	-15 May 12 j 23:39	0° H			-10 May 12 j 04:14	0° Ω	
	-15 Jun 27 j 20:17	0° Y			-10 Jul 02 j 23:03	0° M	
retrograde	-15 Sep 04 j 03:23	24° Y 39'48			-10 Aug 18 j 04:25	0° $\underline{\text{A}}$	
min. Earth dist.	-15 Oct 03 j 06:50	18° Y 49'47	0.48535 AU	desc. node	-10 Sep 06 j 04:33	13° $\underline{\text{A}}$ 05'25	
opposition	-15 Oct 11 j 07:21	15° Y 55'06	-1°-44'-45		-10 Sep 29 j 21:39	0° M	
greatest brilliancy	-15 Oct 10 j 13:31	16° Y 11'18	-2.2m	evening set	-10 Nov 09 j 14:07	0° J 20'44	
direct	-15 Nov 13 j 20:43	8° Y 48'52			-10 Nov 09 j 03:15	0° J	
asc. node	-15 Nov 13 j 23:06	8° Y 48'52			-10 Dec 17 j 19:24	0° Z	
	-14 Jan 21 j 20:29	0° B		max. Earth dist.	-9 Jan 08 j 15:51	17° Z 13'08	2.37233 AU
	-14 Mar 18 j 09:38	0° II					
	-14 May 08 j 06:09	0° S		conjunction	-9 Jan 11 j 13:07	19° Z 29'54	-1°-3'-20
	-14 Jun 26 j 02:47	0° Ω		minimum elong	-9 Jan 11 j 11:39	19° Z 27'00	1°03'20
evening set	-14 Aug 08 j 20:41	27° Ω 52'16			-9 Jan 24 j 20:28	0° \approx	
	-14 Aug 12 j 03:13	0° M			-9 Mar 04 j 04:28	0° H	
max. Earth dist.	-14 Aug 30 j 16:01	12° M 11'30	2.59455 AU	morning rise	-9 Mar 22 j 11:55	14° H 03'28	
					-9 Apr 12 j 16:01	0° Y	
conjunction	-14 Sep 24 j 17:41	29° M 03'22	0°39'26		-9 May 24 j 01:00	0° B	
minimum elong	-14 Sep 24 j 18:57	29° M 05'31	0°39'25	asc. node	-9 Jul 06 j 20:18	29° B 55'40	
	-14 Sep 26 j 02:53	0° $\underline{\text{A}}$			-9 Jul 06 j 22:55	0° II	
	-14 Nov 08 j 01:19	0° M			-9 Aug 23 j 08:09	0° S	
morning rise	-14 Nov 12 j 02:45	2° M 54'30			-9 Oct 16 j 12:07	0° Ω	
desc. node	-14 Dec 02 j 07:15	17° M 32'53		retrograde	-9 Dec 25 j 06:26	20° Ω 59'19	
	-14 Dec 19 j 04:12	0° J		opposition	-8 Feb 02 j 19:04	11° Ω 40'06	4°35'44
	-13 Jan 27 j 22:42	0° Z		greatest brilliancy	-8 Feb 03 j 05:50	11° Ω 29'27	-1.3m
	-13 Mar 08 j 00:25	0° \approx		min. Earth dist.	-8 Feb 05 j 05:21	10° Ω 42'35	0.66799 AU
	-13 Apr 16 j 05:55	0° H		direct	-8 Mar 15 j 02:57	1° Ω 40'01	
	-13 May 26 j 19:55	0° Y			-8 Jun 06 j 18:37	0° M	
	-13 Jul 09 j 18:20	0° B		desc. node	-8 Jul 24 j 03:40	28° M 16'59	
	-13 Sep 01 j 21:15	0° II			-8 Jul 26 j 19:17	0° $\underline{\text{A}}$	
asc. node	-13 Oct 01 j 21:35	9° II 45'20			-8 Sep 08 j 14:58	0° M	
retrograde	-13 Oct 16 j 19:43	11° II 12'43			-8 Oct 19 j 03:25	0° J	
min. Earth dist.	-13 Nov 20 j 06:01	3° II 23'29	0.60326 AU		-8 Nov 26 j 20:14	0° Z	
opposition	-13 Nov 25 j 12:02	1° II 18'34	2°14'42	greatest brilliancy	-8 Dec 10 j 09:52	10° Z 40'54	1.2m
greatest brilliancy	-13 Nov 24 j 20:31	1° II 33'58	-1.6m		-7 Jan 03 j 21:26	0° \approx	
	-13 Nov 28 j 20:05	30° R 8		evening set	-7 Jan 16 j 03:56	9° \approx 39'01	
direct	-12 Jan 02 j 01:41	22° B 35'22			-7 Feb 11 j 07:26	0° H	
	-12 Feb 09 j 02:28	0° II			-7 Mar 22 j 22:58	0° Y	
	-12 Apr 13 j 18:51	0° S					
	-12 Jun 05 j 03:16	0° Ω		conjunction	-7 Mar 23 j 00:45	0° Y 03'19	0°-36'-56
	-12 Jul 23 j 08:15	0° M		minimum elong	-7 Mar 23 j 03:14	0° Y 07'55	0°36'55
	-12 Sep 06 j 12:19	0° $\underline{\text{A}}$			-7 May 03 j 11:07	0° B	
evening set	-12 Sep 18 j 06:38	8° $\underline{\text{A}}$ 07'14		max. Earth dist.	-7 May 06 j 23:31	2° B 28'24	2.48664 AU
max. Earth dist.	-12 Oct 03 j 00:12	18° $\underline{\text{A}}$ 28'28	2.48313 AU	morning rise	-7 May 22 j 22:27	13° B 33'40	
desc. node	-12 Oct 19 j 05:34	0° M 06'23		asc. node	-7 May 23 j 18:54	14° B 08'49	
	-12 Oct 19 j 02:02	0° M			-7 Jun 16 j 04:02	0° II	
					-7 Aug 01 j 05:25	0° S	
conjunction	-12 Nov 09 j 06:51	15° M 33'06	0°-13'-27		-7 Sep 19 j 00:28	0° Ω	

Planetary Phenomena of Mars from -400 through 100 (UT), Astrodienst AG 7-Dez-2017 14:48, page 40

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

	-7 Nov 11 j 21:03	0°♎			-1 Mar 03 j 14:30	0°♏		
retrograde	-6 Feb 01 j 00:57	26°♎13'26			-1 Apr 19 j 01:09	0°♐		
opposition	-6 Mar 10 j 18:24	17°♎49'57	3°34'39		-1 Jun 05 j 04:59	0°♑		
greatest brilliancy	-6 Mar 11 j 20:32	17°♎25'06	-1.5m	evening set	-1 Jun 18 j 14:18	8°♑28'58		
min. Earth dist.	-6 Mar 16 j 23:33	15°♎28'34	0.60251 AU		-1 Jul 22 j 11:48	0°♒		
direct	-6 Apr 20 j 16:35	8°♎00'35		max. Earth dist.	-1 Jul 28 j 01:09	3°♒32'29	2.67143 AU	
desc. node	-6 Jun 11 j 01:46	21°♎31'43						
	-6 Jun 28 j 02:32	0°♐		conjunction	-1 Aug 03 j 19:04	7°♒50'59	1°09'33	
	-6 Aug 16 j 01:44	0°♑		minimum elong	-1 Aug 03 j 19:11	7°♒51'11	1°09'33	
	-6 Sep 27 j 04:51	0°♒			-1 Sep 07 j 05:04	0°♓		
	-6 Nov 05 j 15:05	0°♓		morning rise	-1 Sep 17 j 08:50	6°♓36'13		
	-6 Dec 14 j 04:18	0°♈			-1 Oct 22 j 21:25	0°♈		
	-5 Jan 22 j 02:01	0°♉			-1 Dec 06 j 08:53	0°♑		
	-5 Mar 03 j 06:02	0°♒			00 Jan 18 j 18:07	0°♓		
evening set	-5 Mar 21 j 23:06	13°♒32'27		desc. node	00 Feb 01 j 00:20	9°♓17'39		
asc. node	-5 Apr 10 j 18:25	27°♒33'48			00 Mar 01 j 08:39	0°♈		
	-5 Apr 14 j 06:05	0°♉			00 Apr 12 j 23:27	0°♈		
					00 May 27 j 22:31	0°♉		
conjunction	-5 May 16 j 23:35	22°♉26'00	0°21'26		00 Aug 02 j 01:03	0°♒		
minimum elong	-5 May 16 j 22:33	22°♉24'17	0°21'25	retrograde	00 Aug 14 j 11:29	1°♒06'19		
	-5 May 28 j 06:26	0°♐			00 Aug 26 j 17:18	30°♒♈		
max. Earth dist.	-5 Jun 10 j 03:54	8°♐32'55	2.59981 AU	min. Earth dist.	00 Sep 10 j 17:12	26°♒06'17	0.43426 AU	
morning rise	-5 Jul 06 j 21:52	25°♐59'55		greatest brilliancy	00 Sep 17 j 03:02	23°♒58'49	-2.5m	
	-5 Jul 13 j 02:51	0°♑		opposition	00 Sep 18 j 13:25	23°♒30'06	-3°-58'-8	
	-5 Aug 29 j 11:10	0°♒		direct	00 Oct 20 j 06:40	17°♒17'53		
	-5 Oct 17 j 06:33	0°♓		asc. node	00 Nov 30 j 14:32	26°♒33'01		
	-5 Dec 07 j 17:39	0°♈			00 Dec 08 j 22:50	0°♒		
	-4 Feb 07 j 07:50	0°♑			01 Feb 04 j 17:49	0°♉		
retrograde	-4 Mar 22 j 11:19	9°♑36'26			01 Mar 27 j 15:21	0°♐		
opposition	-4 Apr 25 j 16:41	2°♑48'53	0°07'36		01 May 15 j 22:11	0°♑		
greatest brilliancy	-5 Oct 10 j 05:13	25°♑43'53	-4.2m		01 Jul 03 j 03:26	0°♒		
desc. node	-4 Apr 28 j 01:01	2°♑00'54		evening set	01 Jul 25 j 02:37	13°♑56'45		
	-4 May 03 j 23:49	30°♑♈			01 Aug 18 j 23:17	0°♓		
min. Earth dist.	-4 May 04 j 04:42	29°♑55'58	0.48189 AU	max. Earth dist.	01 Aug 20 j 06:05	0°♓50'15	2.62612 AU	
direct	-4 Jun 02 j 09:44	24°♑28'26						
	-4 Jul 02 j 01:38	0°♑		conjunction	01 Sep 09 j 04:28	13°♓57'54	0°53'11	
	-4 Aug 28 j 02:17	0°♒		minimum elong	01 Sep 09 j 05:41	13°♓59'56	0°53'10	
	-4 Oct 10 j 06:53	0°♓			01 Oct 03 j 01:14	0°♈		
	-4 Nov 19 j 19:47	0°♈		morning rise	01 Oct 25 j 14:48	15°♈30'13		
	-4 Dec 30 j 04:52	0°♉			01 Nov 15 j 06:38	0°♑		
	-3 Feb 09 j 14:54	0°♒		desc. node	01 Dec 18 j 22:55	24°♑14'07		
asc. node	-3 Feb 25 j 17:05	11°♒21'20			01 Dec 26 j 19:47	0°♓		
	-3 Mar 24 j 16:22	0°♉			02 Feb 05 j 01:57	0°♈		
	-3 May 08 j 11:36	0°♐			02 Mar 16 j 15:48	0°♈		
evening set	-3 May 09 j 03:51	0°♐26'43			02 Apr 25 j 11:03	0°♉		
	-3 Jun 23 j 16:39	0°♑			02 Jun 05 j 23:33	0°♒		
					02 Jul 22 j 15:09	0°♉		
conjunction	-3 Jun 27 j 09:32	2°♑22'37	0°58'55	retrograde	02 Oct 01 j 11:45	25°♉02'10		
minimum elong	-3 Jun 27 j 08:21	2°♑20'43	0°58'55	asc. node	02 Oct 18 j 14:30	22°♉55'37		
max. Earth dist.	-3 Jul 04 j 12:17	6°♑56'04	2.66276 AU	min. Earth dist.	02 Nov 02 j 21:51	17°♉56'01	0.56178 AU	
	-3 Aug 09 j 16:52	0°♒		opposition	02 Nov 09 j 12:09	15°♉22'12	0°59'48	
morning rise	-3 Aug 12 j 09:55	1°♒43'22		greatest brilliancy	02 Nov 09 j 02:45	15°♉31'20	-1.8m	
	-3 Sep 25 j 22:16	0°♓		direct	02 Dec 15 j 16:39	7°♉10'30		
	-3 Nov 12 j 03:18	0°♈			03 Feb 27 j 10:44	0°♐		
	-3 Dec 29 j 15:13	0°♑			03 Apr 24 j 07:40	0°♑		
	-2 Feb 16 j 14:35	0°♒			03 Jun 13 j 20:44	0°♒		
desc. node	-2 Mar 16 j 01:20	15°♒43'16			03 Jul 31 j 11:36	0°♓		
	-2 Apr 13 j 04:48	0°♓		evening set	03 Sep 02 j 08:23	21°♓43'10		
retrograde	-2 Jun 04 j 08:57	13°♓55'02			03 Sep 14 j 12:53	0°♈		
opposition	-2 Jul 04 j 12:11	8°♓56'36	-6°-13'-58	max. Earth dist.	03 Sep 18 j 18:54	2°♈55'07	2.53120 AU	
greatest brilliancy	-2 Jul 05 j 01:00	8°♓48'04	-2.8m					
min. Earth dist.	-2 Jul 06 j 12:04	8°♓24'41	0.37756 AU	conjunction	03 Oct 21 j 17:20	26°♈03'11	0°09'35	
direct	-2 Aug 04 j 01:21	3°♓46'00		minimum elong	03 Oct 21 j 17:47	26°♈04'00	0°09'34	
	-2 Oct 15 j 14:51	0°♈		behind sun begin	03 Oct 21 j 00:04	25°♈32'16		
	-2 Dec 02 j 14:29	0°♉		behind sun end	03 Oct 22 j 11:31	26°♈35'45		
asc. node	-1 Jan 13 j 14:52	27°♉45'06			03 Oct 27 j 05:07	0°♑		
	-1 Jan 17 j 00:18	0°♒		desc. node	03 Nov 05 j 21:51	7°♑01'53		